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Determining Worth: Cell Phones And Their Perceived Place In Secondary Education Classrooms

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DETERMINING WORTH: CELL PHONES AND THEIR PERCEIVED PLACE IN SECONDARY EDUCATION CLASSROOMS

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DEDICATION

This dissertation is dedicated to my family. They have never wavered in their belief that I could accomplish this monumental task.

To my wife and daughter–you have been my biggest cheerleaders. You encouraged me from day one and stood right beside me the entire way, inspiring me to the end.

To my mother and my stepfather—thank you for teaching me to believe in myself and to finish things I begin.

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ABSTRACT

Determining Worth: Cell Phones and their Perceived Place in Secondary Education Classrooms is an action research study that describes and evaluates educators' perceptions of Personal Electronic Devices (PEDs), primarily smartphones, in secondary education classrooms at Jackson High School in Upstate South Carolina. The identified problem of practice that undergirds the present study involves a lack of consistency among secondary educators at this school as to how, when, and why PEDs are allowed for classroom use. The study explores these teacher-participants' interests in and aversions to using PEDs as instructional tools and communication devices, and concurrently examines current instructional practices, school-level protocol concerning PEDs, and curriculum decisions involving the use of PEDs at JHS. The research question that guides this study is "What are high school educators' perceptions of students' use of PEDs in the classroom?" Surveys and interviews provide primary data for this qualitative action research study. Findings include educators' desires to use PEDs in curriculum and instruction coupled with their lack of knowledge on how to effectively incorporate the engaging devices in reliable and practical ways. An Action Plan based on these findings was designed in conjunction with the teacher-participants to enable them to make informed decisions regarding PED integration in their classrooms to improve curriculum and instruction aimed at improving and enhancing students' scholarly activity.

Keywords: Personal Electronic Devices (PEDs), Technology Integration

PREFACE

This preface is an acknowledgment that the problem of practice for this action research study, and the study itself, began at Jackson High School [pseudonym] before JHS adopted Chromebooks and became a 1-to-1 institution. The researcher-participant did not have knowledge of the school's impending transition to 1-to-1 at the onset of this study, but the advent of 1-to-1 must be acknowledged as a variable that impacted some teachers' perceptions regarding the use of personal electronic devices (PEDs) in their classrooms.

Furthermore, it is important to recognize the policies regarding PEDs at JHS and how those policies changed from a zero-tolerance policy for PEDs as recently as 2012 to policies allowing various and inconsistent levels of acceptable device usage from the years 2013-2015, to finally reaching the status of being a 1-to-1 Chromebook school in the 2016-2017 academic year. The intermittent changes in policy were significant in the initial stages of forming the problem of practice and purpose of this action research study.

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CHAPTER 1

INTRODUCTION

Teenagers, like most people in the developed world where rapidly evolving technologies are constant, are glued to their personal electronic devices (PEDs) which, in the United States today, are primarily smart phones. Schools, the home-away-from-home for many teenagers, are in a precarious position with teens who are seemingly unable (and unwilling) to separate from their PEDs. As it becomes clear that this technology is not going away anytime soon, school personnel at Jackson High School (pseudonym) grapple with a paradigm shift as they move from policing PEDs to utilizing them in their classrooms. The current Action Research study determined the broad theme of a lack of professional development regarding technology integration in classrooms. The theme can be seen in information gathered during this study's data collection, during which teacher-participants consistently mentioned concerns that can be categorized in the patterns of control, cheating, preparation, fear, responsibility, and frustration.

Introduction of the Topic

PEDs in today's world are far more than communication devices, as they allow users to access the internet, watch live and recorded video, take photographs and video, and play games among other countless applications. The present Action Research study focused on the perceptions of students and educators at JHS who use technology. Understanding these students' and educators' needs, desires, and worries in the realm of

PED integration was a key part of planning the future of what is going to be allowed and expected in the JHS classrooms of tomorrow. Texting, one of the primary uses of PEDs, is often combated at JHS and dismissed as simply a classroom distraction. According to a national statistic, "the vast majority of cell phone owners send and receive text messages" and teenage users send the vast majority of texts sent ("Texting is Nearly Universal," 2012), which is consistent with the behaviors at JHS. Porath (2011) notes that if schools fail to acknowledge this heavy use of texting by teens that they are "playing ostrich, with their heads in the sand, by not harnessing the power of this medium for purposes of education" (p. 86). For example, educators can organize students into small groups for a project-based unit and allow them to text each of the group members as they delve into the research required for an inquiry-based unit where students make meaning for themselves. In other words, texting does not have to be a negative thing. On the contrary, students enjoy talking to each other within this forum, so harnessing the power of texting within the context of curriculum pedagogy make sense at a grassroots level to educators who are in the classroom on a day-to-day basis. Text messaging implementation is important, but is likely only one small component of what will ultimately be more complex implementations with PEDs.

For example, students can now use their smartphones to surf the World Wide Web, make visual presentations (such as PowerPoints), and other complex illustrations that demonstrate their knowledge and understanding of curricular material. In the age of high-stakes testing and summative assessments, as well as the influence of corporate-based textbook companies, educators today strive to develop formative assessments that meet the needs of diverse learners with different learning styles. PEDs cross racial,

gender, and socioeconomic lines; everyone owns one! Therefore, since they are no longer in their infancy, PEDs as educational tools cannot, and should not, be dismissed by JHS personnel. Harnessing the power of PEDs is at the root of this Action Research study and its investigation of the dynamic possibilities of these contemporary devices.

Statement of the Problem of Practice

Jackson High School (pseudonym) is a rural high school located in the upstate of South Carolina. At JHS, the policy for students' use of PEDs is inconsistent and intermittently enforced, leaving teachers and students with no consistent structure for when and how students can use their PEDs at school. Some JHS teachers use PEDs as a pedagogical and curricular tool, while others do not. A systemic investigation into the study of PEDs at JHS was conducted to establish a protocol that is a compromise for all at JHS to move forward as technology continues to rapidly change.

Research Question

Mertler (2014) emphasizes that the planning stages of action research require careful consideration, and that the development of a research question or questions is vital in the research cycle (pp. 86-87). By limiting a topic and forming initial ideas into reasonable questions, a researcher is able to plan methodologies and guide data collection in specific ways that would be difficult or impossible to control if the research topic were not formally stated as a question. Action research also provides the benefit of working in a spiraled nature, allowing the researcher to continuously revisit the question(s) throughout cycles of the research.

The following research question was developed to guide and organize this action research study on the perceptions of educators concerning the integration of Personal

Electronic Devices (PEDs) in the researcher-participants' and teacher-participants' classrooms.

1. *What are high school educators' perceptions of students' use of PEDs in the classroom?*

By answering this research question, JHS, as well as its school district, will be able to make informed decisions concerning future iterations of technology integration plans. It is already evident that PED use is ubiquitous. The true issue is how schools and districts react to the influx, whether intentional or not, of PEDs in the classrooms.

Purpose of the Study

The primary purpose of the present action research study is to describe JHS teacher-participants' perceptions regarding the integration of PEDs in their classrooms for curricular and pedagogical use. Specifically, the participant-researcher describes the perceptions of JHS educators who used PEDs in their classrooms prior to and during the Fall 2016 semester. A secondary purpose of the research is to describe some of the ways in which JHS teacher-participants utilize PEDs in their classrooms. Teacher-participants' experiences, approaches, and levels of expertise with incorporating PEDs in curriculum and pedagogy is described. Teacher-participants' perceptions are described in detail in this dissertation in practice to provide guidance for JHS to better meet the needs of JHS students by increasing their classroom participation, engagement, and scholarly achievement vis-à-vis PEDs.

Rationale. As a classroom teacher, my interests include incorporating technology into my lessons and I recognize that my students' interest in technology is based on their PEDs. I strongly believe that the typical secondary classroom has a necessary place for

integrated technology, and I, like many teachers at JHS, struggle to define exactly how, when, and why the technology needs to be integrated.

I have endured many successes and many failures with attempts to integrate technology into my classroom over the years. Many of the failed attempts involved trying to incorporate new devices that were unfamiliar to students, such as 'individual response systems' (also known as "handheld clickers") and then realizing that the expense, the extensive planning, and the often frustrating implementation seemed to be more trouble than it was worth. Incorporating the use of new devices often means taking extra time to train the students to properly use and understand the technology. Additionally, new items are usually expensive and available only periodically as they are shared between teachers across the school. I want to create a Progressive educational setting for my students, one in which they can use their PEDs to help them solve problems. The use of PEDs will mimic the use of PEDs in higher education and in the business world, where PEDs are simply tools utilized to solve problems, not devices deemed inappropriate due to incessant distractions. When curriculum limits students to learning answers to questions on standardized tests, technology cannot be harnessed to solve problems bigger than the students themselves, such as poverty, racism, and war. I believe the benefits of technology are limitless, but only if the technology is allowed to be used that way.

Thomas and Orthober (2011) argue that, "students are engaged by [cell phones and texting] and [are] motivated to use it" (p. 56). Today, students, like most people, are inseparable from their cell phones, and that means the technology is always in their hands. Students *want* to use their devices. Teachers *want* students to be more attentive,

engaged, and participative. I *want* to figure out how JHS educators can use PEDs in their secondary classrooms to the benefit of their students. Mertler (2014) claims, "It is important to remember that the goal of any action research project is a desire to make things better, improve some specific practice, or correct something that is not working as well as it should" (p. 39). Cell phones *are* in classrooms. Teenagers *are* texting. The incorporation of these things into daily academic routines can be improved. As the participant-researcher, my research question about my identified PoP for this DiP is especially relevant to me because I am a proud advocate of utilizing PED technology in my classroom. The problems and distractions caused by PEDs and texting are common among my colleagues, which is why I want to discover how to improve the inclusion of them into regular JHS classroom activities by gauging the perceptions of my fellow educators.

Operational Definitions

1:1 Computing (One-to-One Computing). A program design that provides every student in a school a laptop computer, tablet, or other mobile computing device. The term implies one device for every one student.

21st Century Skills. Skills and traits deemed by educators to be necessary for a student to succeed in today's world. For this study, the term will specifically refer to the belief that 21st Century Skills should include proficiency in "Information and communication technology (ITC) literacy, media and internet literacy, visual interpretation, data interpretation and analysis, [and] computer programming" ("The Glossary of Education," 2014).

Applications (Apps). Computer or mobile device software specifically designed to complete certain tasks.

Bring Your Own Technology (BYOT). Initiatives within schools/districts that allows students to bring and use their own mobile technology for classroom use.

Digital Literacy. The ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills (Visser, 2014).

Digital Natives. For this study, people who were born into a world where digital technologies already existed. They are "natives" of digital technology, and do not know life without these technologies. They speak the language of technology and intuitively understand its usage.

Electronic-learning (e-learning). Learning supported and/or facilitated by the use of digital communication technology.

Personal Electronic Devices (PEDs). Student-owned cell phones, MP3 players with communicative capabilities, tablet computers, laptop computers, and other similar devices

Perception. For this study, personal beliefs held about certain concepts or entities.

Short Messaging Service (SMS). The system used by cell phones and other capable digital devices to send short messages using network technology. Also known as "text messaging."

Smartphones. Cell telephones with built in access to the internet, SMS services, still and video cameras, video and music players, applications, and mobile computing. Usually employs touch-screen technology.

Student Engagement. "A student's willingness, need, desire, and compulsion to participate in, and be successful in, the learning process promoting higher level thinking for endured understanding" (Goad, 2012, p. 9).

Technology. For this study, technology is referred to as a digital tool one can use to ascertain information, engage in lessons, solve specific problems, or complete certain tasks.

Technology Integration. The intentional incorporation of digital technologies into classroom environments with the purpose of aiding the achievement of educational goals.

Theoretical Framework

Thomas and Orthober (2011) note that "when one considers constructivist learning theory's emphasis on communication and technology's ability to promote student to student, student to content and student to teacher interaction, text-messaging has great instructional potential" (p. 56). The use of technology in the classroom, to some educators, falls under the theory of progressivism, which claims "children learn better by active engagement rather than listening to teachers" (Collins & Halverson, 2009, p. 97).

The integration of technology into classrooms provides students a way to actively engage in the lessons being taught in their classrooms, and it is occurring at unfathomable speeds, often on the basis of the availabilities of the new technologies. It should be noted that the pedagogical implications are sometimes lost in the rush to show off the shiny new gadgets. Churcher, Downs, and Tewksbury (2014) argue that this is due to the fact that "those routinely employed to implement these technologies are not educators, but more commonly technical consultants and IT staff" (p. 33). The goal of these individuals

is to make the technology function properly, not to ensure it is being incorporated using best practices or to increase student engagement or learning outcomes. The goal, which echoes Progressivism, should be to promote democratic self-living and individual thinking while improving an ever-changing technological and educational landscape.

By approaching the issues of integrating cell phones into classroom practice through a Progressive framework, the present action research study aimed to identify the necessary changes that need to take place in order to accurately reflect the technological trends of society while simultaneously incorporating high-level, creative thinking and sound pedagogy to engage students in relevant, Progressive learning.

Action Research Methodology

This study called for the use of action research as its form of methodology. Action research is defined by Mertler (2014) as:

> any systematic inquiry conducted by teachers, administrators, counselors, or others with a vested interest in the teaching and learning process or environment for the purpose of gathering information about how their particular schools operate, how they teach, and how their students learn. (p. 305)

I conducted research in the district in which I am employed as a full time teacher. The use of action research was instrumental in trying to provoke positive change on the future technology integration policies implemented not only in my personal classroom, but in all classrooms throughout my school.

Since action research varies in many ways from traditional research, Table 1.1 is included to highlight some of the key differences between the two types of inquiry.

Table 1.1
Advantages and Limitations of Traditional and Action Research

	Advantages	Limitations
Traditional Research	This type of research is usually conducted by experts or professional researchers independent of the research subject (Glickman, Gordon, & Ross-Gordon, 2014, p. 305). Allow researchers to work on studies over long periods of time (Quang & Hang, 2008, p. 205). Traditional research helps to develop new, generalized knowledge that can apply to various student groups, not just those used in the study (Quang & Hang, 2008, p. 205).	Extensive training in researching is needed (Quang & Hang, 2008, p. 205). Extremely rigorous control methods are required (Quang & Hang, 2008, p. 205). The primary audience for the research is other researchers (Glickman, Gordon, & Ross-Gordon, 2014, p. 305). Knowledge gained is general by nature and may not be applicable to specific student groups
Action Research	Is collaborative, and empowers the teacher and leads to professional growth (Mertler, 2014, p. 19). Engages researchers in "research [that] is practical and relevant to classroom teachers, since it allows them direct access to research findings" (Mertler, 2014, p. 20). Process is continuous, spiraling, and "systematic" (Mertler, 2014, p. 20). Can be changed and adapted as needed during the course of the study (Quang & Hang, 2008, p. 205). Can carry on through multiple semesters/years, even with different student (subject) groups Research questions change during the process (Quang & Hang, 2008, p. 205).	Problems researched may or may not be relevant with later groups of students or future classroom situations. Results are classroom specific and may not benefit the larger educational community; results are "not conclusive; the results of action research are neither right nor wrong" (Mertler, 2014, p. 21).

One of the primary differences between the two research types is that the action research process is not linear; it is continuous and cyclical (Mertler, 2014). By giving the researcher the mutual benefit of being part of the research as it happens and giving them the freedom to adapt the study as necessary changes become apparent, action research stands above traditional research as a method that is increasingly relevant in the development of professional educators and the systems in which they work.

Chapter Three of this dissertation will further discuss the general action research process, as well as specific steps designed to gain the largest benefit from enacting this method of inquiry. The systematic and reflective characteristics of this type of research will be particularly beneficial to the stakeholders of Jackson High School as they benefit from real-time research results and suggested changes for improvements to an already fluid technology use policy.

Participant Selection

The participants of this action research study were educators (teachers and administrators) in grades 9-12 at Jackson High School in upstate South Carolina. By analyzing the data gathered from educators in the school where I teach, the results were able to more accurately inform future curriculum decisions than if the data had been collected in another school. Since technology integration is not grade level or content specific, all grades, 9-12, and all core content areas were explored. I joined the selected teacher-participants and took part in the study as a participant-researcher.

Research Site

This action research study was conducted Jackson High School, a rural high school in northwestern South Carolina. The school is fully accredited by the South

Carolina Department of Education and the Southern Association of Colleges and Schools Council on Accreditation and School Improvement" ("District Profile, n.d.). Jackson High School educates students in grades 9-12 and currently has an enrollment of 910 students and a faculty of approximately 80 teachers, including one principal and three assistant principals.

Sources of Data Collection

Data collected during this action research study was qualitative. I gathered information from observations (both personal and from other educators), interviews of participating educators, and surveys. The collection of data occurred at multiple stages throughout the research process, increasing validity and providing numerous points of analysis.

Experiencing and Directing the Research

The principal of my school granted me permission to pursue this action research study within my building. He was a key contributor to this study both as the key building level administrator in charge of technology integration and as a participant in the study. The proper and ethical treatment of the human subjects involved in this research was handled by following the steps necessary to satisfy the Human Subjects Review Board and the Institutional Review Board, whose functions are to "protect human subjects involved in a research study" (Mertler, 2014, p. 106). According to regulations set forth by these boards, I gained permission from my human research subjects and ensured that all parts of the research process were transparent and clearly communicated with them as participants. In gaining "informed consent," a letter (see Appendix D) was provided to participants containing the following information:

- A description of the research topic and study
- A description of what participation will involve
- An indication that participation is voluntary and that it can be terminated at any time without penalty
- A guarantee of confidentiality and anonymity
- An offer to provide a summary of the findings to participants
- A place for the participant to sign and date the form (Mertler, 2014, p. 108).

As a participant-researcher, I made myself available to the participants on a regular basis in order to answer questions and to provide information they may have required concerning any aspect of the study. Additionally, I kept a rigid schedule for data collection and observation so as to mutually benefit the participants and myself, as the researcher.

Summary of the Findings

The data revealed a lack of meaningful, direct, and differentiated professional development (PD) among faculty that greatly impacted the perceptions JHS educators have regarding PED use and technology integration in classrooms. A summative data analysis of six teacher-participants' semi-structured interviews revealed attitudes firmly based in Essentialist education theory where subject matter is content discreet (instead of integrated) and where standardization permeates assessments as well curriculum and pedagogy (see for example the back-to-basics movement in American schooling).

Despite some of the teacher-participants verbalizing some Progressive educational theory ideas such as curricular integration, differentiated learning, heterogeneous

grouping, and formative assessment strategies, Essentialist ideals were far more prevalent. In addition to the broad theme of a lack of professional development regarding technology integration, the summative analysis of this qualitative data collection revealed the following patterns:

- Control;
- Cheating;
- Preparation;
- Fear;
- Responsibility; and
- Frustration.

Each of the identified patterns fits under the umbrella of professional development. Additionally, each of the patterns can be addressed, and perhaps eliminated, with an open acknowledgement of the need to move JHS towards a progressive form of curriculum and pedagogy.

The teacher-participants stressed their lack of control with technology in the hands of students. They have constant fears that students are using technology irresponsibly; they worry that students are not doing just what they were told to do with their PEDs. With so many worries about compliance, the teacher-participants seem blind to the idea of control being something that we should be giving our students. If the technology is in their hands *without* step-by-step instructions and a long list of rules to follow, students will begin to use the technology as a tool to direct their own learning.

Cator (2011) notes, "We need to ensure that all of our students grow up understanding how to operate, think, learn, communicate, and collaborate effectively in

an online space" (p. 54). This is progressive thinking that ignores the worries expressed by the teacher-participants in this action research study. Perhaps one of the reasons these teachers are so worried is that they operate under an essentialist paradigm that is effected solely by a laser-focus on student achievement that leaves no room for progressive thinking in this world of rapid technological advancement.

Dissertation Overview

The first chapter of this dissertation has provided an overview of this action research study, including the topic, a statement of problem, a statement of purpose, the rationale behind the study, the theoretical framework on which the study is based, the design of the study, including how participants were selected, where the research was conducted, what questions the study attempted to answer, and what sources of data collection were employed.

Chapter Two of this dissertation provides information from literature and previous studies related to this topic and relevant to this study. By providing a look at previous studies with similar topics and scholarly literature about the evolution of technology integration, a broad understanding can be generated to assist in processing and analyzing new and future information on the topic.

Chapter Three provides a detailed description of the study's methodology, with great attention paid to the implementation of the action research process. The participatory nature of action research, along with its cyclical nature, is discussed.

Chapter Four reports the findings of this study. The chapter includes a detailed analysis of participant and researcher observations, data collected from semi-structured interviews with six teacher-participants based on information gained from a faculty-wide

survey at JHS. Also, this chapter reports the answers of the research question with abundant supportive data and details from the various stages of data collection to help facilitate the understanding of the data being reported.

Chapter Five of this dissertation discusses findings and conclusions of this action research study and presents an action plan aimed at improving JHS based on the findings of this study. The findings include recommendations on the future of technology integration at JHS. The next cycle, or stages of this research, are discussed, along with future implications that this study could have on other areas within the realm of education.

A list of references and appropriate appendices will follow Chapter Five and conclude this dissertation.

Conclusion

Integrating cell phones and other personal electronic devices into secondary education classrooms is a logical and necessary part of the new, technology driven world of 21st century students. Changing the feelings and traditional methods of current students and educators, however, is not an easy task. By exploring the perceptions these educators have about integrating this ubiquitous technology, this study provides information that will allow Jackson High School to overcome the challenges presented by the incorporation of these devices. Overcoming these challenges will clear a path for educators to integrate PEDs into their curricula so that students of today and tomorrow can communicate in classrooms the same way that they communicate in other facets of their lives, in addition to creating a system that provides increased student engagement, participation, and achievement.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

Teenagers, like most people in this world of rapidly evolving technologies, are constantly using their personal electronic devices (PEDs). Today, the most popular PED is the cell phone. These devices are literally mini-computers which enable people to access the World Wide Web (WWW) instantaneously as well as maintain contact with business associates and friends and family. Schools, the 'homes away from home' for many teenagers in the United States, are in a precarious position because the institution of school has not kept pace with the cultural shift of people and their connection to and dependence on their PEDs. As it becomes clearer and clearer that PEDs are not going away, schools, which currently resist allowing teens to utilize their PEDs during school day for fear of cheating, cyber-bullying, and/or sexting, may have to engage in a paradigm shift that will enable school personnel to instead embrace PEDs as an educational tool despite the dangers that are associated with enabling teens to instantaneously access the internet. Prensky (2001) argued 15 years ago that 'digital natives' are the students of today who "are all 'native speakers' of the digital language of computers, video games and the Internet" (p. 1). On the other hand, digital immigrants are "those of us who were not born into the digital world but have" immigrated into a world saturated with digital technologies (2001, p. 1-2). Clearly, time would be better

spent allowing the use of PEDs with these so-called digital natives for educational purposes since they are so intimately connected to students' lives, instead of so-called, digital immigrants 'policing' the use of PEDs around-the-school-day-clock.

Statement of the Problem of Practice

The policy for student use of personal electronic devices (PEDs) in class at Jackson High School [pseudonym] is inconsistent and intermittently enforced, leaving teachers and students with no consistent structure for when and how they can use their PEDs in their classrooms. Some teachers use PEDs as a pedagogical and curricular tool. A systemic investigation into the study of PEDs at Jackson High School will establish a protocol that is a compromise for all to move forward as technology rapidly changes throughout the twenty-first century.

Underlying Causes of the Problem of Practice.

Many schools, including my own, have evolving policies regarding personal electronic devices (PEDs), including cell phones, but the policies are vague. Though policies allow use of devices based on the discretion of individual classroom teachers, little information is provided about how these common devices, and one of their most utilized functions, texting, can be used to improve student engagement, participation, and achievement in the classrooms.

Collins and Halverson (2009) list the following things as potential roadblocks to schools and educators and their desire to integrate 21st century technologies into classrooms: "cost and access, classroom management, what computers can't teach, challenges to instruction, authority and teaching, and assessment" (p. 37). Additionally, research has shown that safety is a primary concern, as issues such as cyber-bullying,

sexting, cheating, and privacy have constant and prominent places in daily news and media reports, creating a culture of fear among educators and administrators, and likely slowing down or derailing plans for integration until there are concrete plans in place to deal with such problems.

Skeptics include many experienced teachers who seem to agree that cell phones and other similar devices have no place in the classroom. However, there are proponents who believe that the benefits of incorporating new technology, in addition to bringing schools into the 21st century, will greatly outweigh the possible negative effects that such integration could bring. This action research study focused on Jackson High School educators' perceptions of intentionally incorporating PEDs into the classroom environment as tools for student engagement and curricular development.

Research Question

The following research question was addressed as part of this action research study:

1. *What are high school educators' perceptions of students' use of PEDs in the classroom?*

Purpose of the Study

The primary purpose of the present action research study was to describe Jackson High School teacher-participants' perceptions regarding the integration of personal electronic devices in their classrooms for curricular and pedagogical use. Specifically, the participant-researcher describes the perceptions of JHS educators who use PEDs in their classrooms. JHS is a rural high school located in the upstate of South Carolina and most students have PEDs. A secondary purpose of the research is to describe some of the ways in which JHS teacher-participants utilize PEDs in their classrooms. Teacher-participants'

experiences, approaches, and levels of expertise with incorporating PEDs in curriculum and pedagogy are described. These different approaches are described in detail in this dissertation to provide a template for JHS teacher-participants' needs in order to increase student participation, engagement, and scholarly achievement.

Position Statement

As a classroom teacher, I am interested in incorporating technology into my lessons. I recognize student interest in technology and believe that the world's fascination with technological devices is still rapidly changing in ways we cannot yet predict or understand. I strongly believe that the typical secondary classroom has a necessary place for integrated technology, and I, like many teachers at my school, have struggled to define exactly how, when, and why the technology needs to be integrated.

Rationale for the Study

I have endured many successes and many failures with attempts to integrate technology into my classroom over the years. Many of the failed attempts involved trying to incorporate new devices that were unfamiliar to students, such as individual response systems (handheld "clickers") and then realizing that the expense, the extensive planning, and the often frustrating implementation seemed to be more trouble than it was worth. Incorporating the use of new devices often means taking extra time to train the students to properly use and understand the technology. Additionally, new items are usually expensive and available only periodically as they are shared between teachers across the school.

Thomas and Orthober (2011) say that data suggests, "students are engaged by [cell phones and texting] and [are] motivated to use it" (p. 56). Students are inseparable

from their cell phones, and that means the technology is always in their hands. As teachers struggle to keep students' attention, should we not at least consider allowing the technology and communication choices of our students? Students *want* to use their PEDs. Teachers *want* students to be more attentive, engaged, and participative. I wanted to figure out how educators at my school perceived this dominant technology and whether or not it could become a staple of JHS classrooms. Mertler (2014) claims, "It is important to remember that the goal of any action research project is a desire to make things better, improve some specific practice, or correct something that is not working as well as it should" (p. 39). Cell phones *are* in classrooms. The reality is: teenagers *are* constantly using their PEDs. The incorporation of these devices into daily academic routines can be improved. My question is especially relevant to me because I am a proud advocate of technology in the classroom. The problems and distractions caused by cell phones and texting are not lost on me, and that is why exploring how to improve the inclusion of PEDs into regular classroom activities by gauging the perceptions of educators was important to me.

Purpose of the Literature Review

All types of serious research should examine existing literature on the topic being explored. Mertler (2014) believes that a literature review is important because it "convey[s] to all individuals interested in the particular topic of the action research project the following:

- The historical context of the topic
- The trends experienced by the topic
- How theory has informed practice and vice versa. (p. 73)

While reviews of literature contain various methodologies, groups of participants, and conclusions, the findings from previous similar studies are what should influence new studies the most, according to Mertler (2014).

For a researcher, exploring the related literature should provide an opportunity to narrow the focus of the research study being conducted. As literature is reviewed, "the researcher grows into a deeper understanding of the issues under study" (Herr & Anderson, 2015, p. 105). Ultimately, the topic is, according to Mertler, "funneled" from broadly related issues to more specific information that "provides support for your study by placing it into a relevant context and demonstrating how your study will potentially contribute to that particular body of literature" (2014, p. 74) and, in the end, the research will show readers who lack familiarity with your topic a chance to gain a better understanding of the research they have not had the opportunity to review on their own.

It should be noted that the literature review often uncovers unanticipated issues for the researcher. Because of this, "the literature review from the proposal phase is expected to shift and change when written up for the dissertation" (Herr & Anderson, 2015, p. 105).

Methodology

As mentioned in Chapter One of this dissertation, the present study was conducted with the use of action research. Action research exists in varying forms, though the cyclical nature of the research process is consistent among them. This particular study utilized Mertler's (2014) action research design. Mertler (2014) in his book *Action Research: Improving Schools and Empowering Educators*, notes that the nature of action research is for the plan and process to evolve, overlap, and change as

research progresses. According to Herr and Anderson (2015), "stages [of action research] often overlap, and initial planning may quickly become obsolete as learning informs the development of the question and the process (p. 89). Additionally, Herr and Anderson (2015) point out that there are parts of action research over which "the researcher may have little control" (p. 89). Considering this information, along with Mertler's defined action research cycle, it was paramount to my study to recognize the basis of the structure of action research, but also to rely on the fact that the plan would change before my research concluded.

Participant Selection

The participants of this action research study were educators (teachers and administrators) in grades 9-12 at Jackson High School in upstate South Carolina. By analyzing the data gathered from educators in the school where I teach, the results were able to more accurately inform future curriculum decisions than if the data had been collected in another school. Since technology integration is not grade level or content specific, all grades, 9-12, and all core content areas were explored. I joined the selected teacher-participants and took part in the study as a participant-researcher.

Research Site

This action research study was conducted Jackson High School, a rural high school in northwestern South Carolina. The school is fully accredited by the South Carolina Department of Education and the Southern Association of Colleges and Schools Council on Accreditation and School Improvement" ("District Profile, n.d.). Jackson High School educates students in grades 9-12 and currently has an enrollment of 910

students and a faculty of approximately 80 teachers, including one principal and three assistant principals.

Similar Studies

Other researchers have used various methodologies to conduct similar studies pertaining to the use of mobile technologies in classrooms. One researcher employed action research "to provide an explanation of findings as a means to enrich teaching practices" (Reynolds-Blankenship, 2013, p. 124). Reynolds-Blankenship (2013) conducted data analysis by using a constant-comparative method to inform best practices in her classroom.

Additionally, other researchers have employed the use of surveys and interviews, as I did, in order to gauge the perceptions of research subjects (Goad, 2012; Johnson, 2014). By collecting data from various participants using surveys and interviews, I was able to gauge perceptions with multiple planned points of contact and deliberate engagement. The survey I employed was administered digitally through the website *SurveyMonkey*, as were the surveys in the previously mentioned studies.

Theoretical Base

In order to show that educators have long debated the merits of contemporary technologies, Collins and Halverson (2009) provide an interesting list of comments from the last 200 years:

- From a principal's publication in 1815: "Students today depend on paper too much. They don't know how to write on a slate without getting chalk dust all over themselves. They can't clean a slate properly. What will they do when they run out of paper?"

- From the *Journal of the National Association of Teachers*, 1907: "Students today depend too much upon ink. They don't know how to use a pen knife to sharpen a pencil. Pen and ink will never replace the pencil."
- From *Rural American Teacher*, 1928: "Students today depend upon store bought ink. They don't know how to make their own. When they run out of ink they will be unable to write words or ciphers until their next trip to the settlement. This is a sad commentary on modern education."
- From *PTA Gazette*, 1941: "Students today depend on these expensive fountain pens. They can no longer write with a straight pen and nib. We parents must not allow them to wallow in such luxury to the detriment of learning how to cope in the real business world which is not so extravagant."
- From *Federal Teachers*, 1950: "Ballpoint pens will be the ruin of education in our country. Students use these devices and then throw them away. The American values of thrift and frugality are being discarded. Businesses and banks will never allow such expensive luxuries."
- From a fourth-grade teacher in Apple Classroom of Tomorrow chronicles, 1987: "If students turn in papers they did on the computer, I require them to write them over in long hand because I don't believe they do the computer work on their own."
- From a science fair judge in Apple Classroom of Tomorrow chronicles, 1988: "Computers give students an unfair advantage. Therefore, students

> who used computers to analyze data or create displays will be eliminated from the science fair." (p. 30-31)

These comments show that technology advancements have been met on a regular basis with assumptions of disruption to existing practices and policies. In the 21st century, many skeptics hold on to these age-old arguments. Prensky (2001) believes that "Digital Immigrant teachers assume that learners are the same as they have always been, and that the same methods that worked for the teachers when they were students will work for their students now" (p. 3). Prensky continues by saying that the assumption of these "Digital Immigrants" is incorrect, and not "valid." Not only has the technology changed over the years, but the learners have changed as well. Teachers must recognize the ubiquitous nature of mobile technology and what it means to teen learners. If not, these teachers and students will be working alongside one another in classrooms, but they will be completely opposed to one another on terms of contemporary technology and what it means for their education.

Collins and Halverson (2009) say, "technology enthusiasts envision schools where students are working on realistic tasks and adults play a supportive role to guide them to new activities and help them when they encounter problems" (p. 29). This is consistent with Dewey's beliefs about student engagement and participation, and it echoes the thoughts of 20th century progressive reformers.

Mobile Devices and Progressivism

Thomas and Orthober (2011) say "when one considers constructivist learning theory's emphasis on communication and technology's ability to promote student to student, student to content and student to teacher interaction, text-messaging has great

instructional potential" (p. 56). The use of technology in the classroom, to some educators, falls under the theory of progressivism, which claims "children learn better by active engagement rather than listening to teachers" (Collins and Halverson, 2009, p. 97).

The integration of technology into classrooms is occurring at unfathomable speeds, often on the basis of the availabilities of the new technologies, and it should be noted that the pedagogical implications are sometimes lost in the rush to show off the shiny new gadgets. Churcher, Downs, and Tewksbury (2014) argue that this is due to the fact that "those routinely employed to implement these technologies are not educators, but more commonly technical consultants and IT staff" (p. 33). The goal of these individuals is to make the technology function properly, not to ensure it is being incorporated using best practices or to increase student engagement or learning outcomes. The goal, which echoes Progressivism, should be to promote democratic self-living and individual thinking while improving an ever-changing technological and educational landscape.

By approaching the issues of integrating cell phones into classroom practice through a Progressive framework, the research being conducted aimed to identify the necessary changes that need to take place in order to accurately reflect the technological trends of society while simultaneously incorporating high-level, creative thinking and sound pedagogy to engage students in relevant, Progressive learning.

Historical Context

"Today's students are no longer the people our educational system was designed to teach" (Prensky, 2001, p. 1). Though Prensky wrote that line in 2001, he easily could have been quoting the early twentieth century work of Franklin Bobbitt. Both men

recognized the changing landscape of American education, and both men recognized the inability or unwillingness of the "current" educational systems to change for the needs of modern students. Bobbitt (1918/2013) adeptly observed, "Never before have civilization and humanization advanced so swiftly," and added that an educational "program never designed for the present day has been inherited" (p. 11). Nearly a decade and a half after Prensky's comment about our educational systems his words are still as poignant as ever, and, remarkably, could be interchangeable with Bobbitt's comments from nearly a century ago.

Bobbitt (1918/2013) asserts that our systems of education must advance at least as rapidly as the world around it. It was apparent to Bobbitt that the system put into place to train students upon the advent of the factories and assembly lines of the Industrial Revolution was not the same system needed as America progressed past the first decade of the twentieth century. Bobbitt (1918/2013) says, "To do the nineteenth-century task better than it was then done is not necessarily to do the twentieth-century task" (p. 11). Bobbitt (1918/2013) adds

> Education is now to develop a type of wisdom that can grow only out of participation in the living experiences of men, and never out of mere memorization of verbal statements of facts. It must, therefore, train thought and judgment in connection with actual life-situations, a task distinctly different from the cloistral activities of the past. (p. 11)

The problems presented by rapidly advancing societies are very real. Bobbitt recognized the implications in 1918 as Marc Prensky recognizes them for twenty first century learners (and teachers). The main issue the educational system is dealing with in

today's world involves the divide between what Prensky (2001) calls "digital natives" and "digital immigrants" (p. 1-2). Digital natives are the students of today who "are all 'native speakers' of the digital language of computers, video games and the Internet" (p. 1). Digital immigrants are "those of us who were not born into the digital world but have" immigrated into a world saturated with digital technologies (Prensky, 2001, p. 1-2). The immigrant metaphor is extrapolated further as Prensky (2001) emphatically states, "The single biggest problem facing education today is that *our Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language*" (p. 2).

To further extend the metaphor of the immigrant versus the native, look no further than the work of Jane Addams in the *first decade* of the twentieth century! Addams (1908/2013), speaking of actual immigrant children (not digital immigrant teachers) notes that "the schools ought to do more to connect these children," (p. 41) and adds that if schools could get the immigrant children to bring their own culture into schools, then schools and teachers would discover that the new culture would make the material we are currently providing them seem like a "poor, meretricious and vulgar thing" (Addams, 1908/2013, p. 43).

Today, the immigrants are the instructors, not the students. The same principles apply today, however, that applied to the early twentieth century; take your pick between the musings of Bobbitt, Addams, and Prensky… they eerily apply to the digitally-driven, technology-based society in which we now live:

- "New duties lie before us. And these require new methods, new materials, new vision" (Bobbitt, 1918/2013, p. 11).

- "The ignorant teacher cuts [the student] off because he himself cannot understand the situation" (Addams, 1908/2013, p. 42).
- "Unless we want to just forget about education [students] until they grow up and do it themselves, we had better confront this issue. And in so doing we need to reconsider both our methodology and our content" (Prensky, 2001, p. 3).

Instructional Benefits

Interaction. "Among all teens, the frequency of use of texting has now overtaken the frequency of every other common form of interaction with their friends" and "half of teens send 50 or more text messages a day, or 1,500 texts a month, and one in three send more than 100 texts a day, or more than 3,000 texts a month" (Lenhart, Ling, Campbell, & Purcell, 2010, p. 4). These emerging numbers prove that teens are increasingly communicating, by choice, through the use of their cell phones. Research suggests that if educators can find a way to channel that interaction, instruction will surely benefit. Of the multiple benefits that can be reaped from this type of interaction, one that is particularly interesting is what Porath (2011) calls "visual/audible anonymity" (p. 87). For students who are reluctant to participate in class or group discussions, texting affords the opportunity to be "heard" without having to overcome the nervousness or anxiousness that often prevents these students from participating in the typical classroom settings.

The fact that teenagers nearly always have their phones is another benefit. PEDs give students a way to always have access to communication with other students and with course content (Thomas & Orthober, 2011, p. 57). For example, a student may be able to text a classmate or teacher while on a bus ride to an athletic event, waiting to be picked

up from school, or during another period of downtime. These types of interaction promote a continuous learning community and can be a starting point for text messaging being incorporated into academic routines for students and teachers.

Student Reflection and Class Discussion. According to Thomas and Orthober (2011), one of the primary components of text messaging in the classroom is the fact that texting, by nature, is "asynchronous" (p. 57). With a digital record of the conversations that occur during class time, students can review and amend the discussions at will. Any or all interested parties can follow the interaction over time. Also, "some students may not feel comfortable making comments in the classroom, either because a student is shy, or because of students who dominate classroom discussion. Again, texting provides a place for these students to participate in the classroom discussion" (Thomas & Orthober, 2011, p. 57). The idea of interactive discussion spanning areas far beyond the classroom is supported by Richardson and Lenarcic (2009); they say that texting and cell phone technology show "student mobility, development of a global skill set and improved relationship networks within [their] community. Students in such a pedagogic mobile framework are not isolated learners but part of a linked network with the potential to span the globe" (p. 843).

Assessment. Text messaging can be used in many ways to gauge student performance. The ease of access to cell phones and the willingness of students to use texting creates a dynamic opportunity for formative assessments such as class polls and pop quizzes. The Princeton Review and Kaplan, among others, are companies who have embraced the technology by offering SMS-based test preparation materials for such tests as the SAT (Thomas & Orthober, 2011, p. 57).

Free web-based applications such as Poll Everywhere (www.polleverywhere.com) offer SMS-based questioning applications that allow teachers and students to instantly create questions that can be answered by anyone with a cell phone in order to provide instant data that is graphed, charted, and accessible at any time. These polls, and other similar applications, have countless possibilities within the classroom and beyond.

Student Perspective. As previously noted, the vast majority of students already own cell phones and use text messaging as a form of communication. This familiarity removes a burden from the teacher: there is no need to train the students to use this method of communication. Additionally, Thomas and Orthober (2011) say that students "like texting because it is fast and easy to use and because the anytime anywhere aspects of the phones allow them to multitask" (p. 58). Students also may benefit from being able to quietly communicate by texting at times when audible talking is discouraged or completely disallowed. Likewise, teachers could subtly communicate messages to students, as individuals or as a group, without making the students embarrassed about being called down by a teacher during class.

Instructional Barriers--Policing Students

Many schools adopted the "See it? Hear it? Take it!" policy upon the advent of teenagers using PEDs (Porath, 2011, p. 86). The immediate assumption was that PEDs were unnecessary distractions and that there was no place for them in academic settings. Earl (2012) says, "It's naïve to imagine that students armed with cell phones won't be quietly typing away under their desks," and follows by noting how "this activity is much harder to regulate than traditional note-passing" (p. 3). Aside from basic classroom distraction and disruption, three primary reasons exist that drive the concerns of parents,

teachers, and school administrations: cheating, cyberbullying, and sexting. These concerns are legitimate, and the possible drawbacks must be weighed against the potential benefits. Additionally, as a 2013 study by Mark Griffiths suggests, teenagers are showing symptoms of becoming "addicted" to cell phones in the same ways that others are addicted to food, gambling, and even alcohol.

Cheating. There is clearly reason for concern in the category of students using text messaging to cheat, and many of the concerns are founded with the same reasoning that also makes texting beneficial: the devices are quiet, they are almost always on the person, and they can be used to access anyone, anywhere, anytime (Thomas and Orthober, 2011, p. 58). In a study conducted by Common Sense Media (2009), one-third of high school students admitted to cheating by using their cell phones. In addition to text messaging, students report using their phones to take pictures of assessments in order to pass them along to peers who will be taking assessments later in the day and to using their phones to cheat by searching the internet during tests, quizzes, and other assessments (Common Sense Media, 2009). This information clearly justifies the need for further research to determine whether or not the cheating can be curbed as a student behavior in order to reap the possible benefits that the cell phones can offer.

Cyberbullying. Like traditional bullying, cyberbullying is a problem that has gained a tremendous amount of attention in recent years. Thomas and Orthober (2011) found that nearly half of all teenagers had experienced some type of cyberbullying (p. 59). Constant access to cell phones provides another avenue for bullies to perpetrate bullying behaviors on others, and the actions must be closely monitored. Just as the anonymity of using a phone to participate in class discussions is viewed as a benefit of

texting in school, the same anonymity could offer bullies a way to continue unwanted behaviors through the digital spaces created for learning.

Sexting. Another serious concern connected to cell phones is the practice of "sexting." Sexting is "taking a sexually explicit image, often of oneself, and sending to someone via text messaging (Thomas & Orthober, 2011, p. 59). While not the focus of this particular study, this serious offense is a drawback of text messaging and it has implications on the state of teenagers and their decisions about how they use their cell phones.

Ethical Considerations

The ethical considerations surrounding this research require me to understand the complex nature of communication with students through personal devices. There are clearly some intricate privacy issues involved, but as text messaging becomes more prevalent in our society, I believe that it will become commonplace and universally acceptable for teachers, parents, and students to communicate through text messaging. Additionally, it will be necessary, as with any research involving human participants, to gain the express consent of the subjects being studied.

Dana and Yendol-Hoppey say, "the ultimate goal [is] doing no harm to the students you teach or any other people involved in your inquiry" (p. 155). The researcher has responsibilities, and teachers, in particular, have ethical responsibilities to not let their research interfere with the job their district hired them to complete. This study will require the consent of the district and/or school-level administration to allow students and teachers to exchange cell phone numbers for implementation of the inquiry. If parents, students, and necessary district personnel are properly informed of the intention of the

study and the proposed benefits to student learning, I think the primary concern of student safety and privacy will be eliminated. A consideration, however, would be for the researcher to obtain a "work phone" that could be monitored by district officials in the same way that classroom "teacher" computers are monitored, providing a safety net for students and parents by publicly assigning the essential research tool (the teacher's cell phone) to the school and/or district rather than having the teacher user their own personal cell phone for the study.

In addition to privacy, another ethical consideration is that not all students have cell phones. Socioeconomic status likely drives the statistics on which students do not have their own cell phones, and data could be impacted by the variety of students eligible for participation in the study, particularly if participation requires the student to own their own cell phone.

Teenage Consumerism

In his book *The American School: A Global Context: From the Puritans to the Obama Administration*, author Joel Spring (2014) poses the question "What should be the relationship between schools and media" (p. 327)? The question that once pondered the places of television and movies in the lives of teens has evolved in the minds of educators to include how the always connected mobile devices carried by the majority of teens are influencing 21st century students. Perhaps the most intriguing part of the mass media culture is that the consumer market of teenagers is more accessible to today's advertisers than at in any point in time before now.

Spring (2014) notes that in the early 20th century, parents and educators faced the harsh reality of their children becoming the targets of advertisers. The early 21st century

has compounded that fear by providing teens with technology that has many of them connected to media for nearly half of every calendar day, providing countless opportunities for advertisers to prey on their still developing consumerism. A remarkable 46% of teens aged 12-17 spend ten or more hours per day on the internet (Gerderman, 2013). Pair that information with recent technology data that confirms that nearly eight out of ten teens has a cell phone and that "mobile access to the internet is common among American teens, and the cell phone has become an especially important access point for [them]" (Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013) and it becomes clear that teens cherish the mobile devices and that marketers know they have a constantly captive audience. As educators learn new ways to incorporate rapidly changing technologies into their schools and classrooms, it cannot go unnoticed that the always connected teenage demographic is being heavily targeted by marketers looking to cash in on an easily influenced group.

Schools have a responsibility to prepare students as responsible citizens for the world in which they live. That preparation should consider the massive teenage consumer market. If, as data suggests, teens are staring at media on any number of devices for hours per day, it seems necessary that the curriculum imposed upon these young people should include educating them on how to digest the steady diet of targeted consumerism on which they are constantly feeding. Spring (2014) says that from the 1950s into the 21st century, "In some minds, democracy was slowly becoming equated with the freedom to consume products" (p. 353). In today's world, there is absolutely no reason that freedom cannot come with the knowledge to consume those products intelligently.

Porath (2011) notes that "research exploring the use of text messaging in formal education settings is still emerging" (p. 87). Thomas and Orthober (2011) agree; however, they state that "initial research on texting would appear to suggest instructional benefits" (p. 56). Thomas and Orthober's (2011) study is frequently cited in related literature, and this researcher's study will use a similar structure to analyze the possible benefits and potential drawbacks of using text messaging in classroom settings.

Reciprocal Education

Paulo Freire (1993/2013) may have been speaking about something other than cell phone incorporation into secondary school classrooms when he wrote *Pedagogy of the Oppressed*, but you would be hard pressed to separate today's schools from those common in Freire's day when analyzing his comments about one-sided, factory-modeled schooling. Freire (1993/2013) imagined a world of education that promoted critical thinking through a continuing dialogue from teacher to student and back again. The critical thinking he envisioned would allow "thinking which does not separate itself from action, but constantly immerses itself in temporality without fear of the risks involved" (p. 159). The dialogue on cell phone use in schools often ignores one side of the conversation (the student's side) and the thinking is often marred with the overwhelming fear of the risk involved in allowing student use of devices that cannot be inherently controlled by the institutions in which they are being used (Earl, 2009; Porath, 2011; Thomas and Orthober, 2011).

The authorities making the decisions regarding technology acceptance and usage in classrooms seem to be ignoring the fact that teenagers want to use their phones on a near constant basis (Lenhart, Ling, Campbell, Purcell, Pew Internet, & American Life,

2010; "Texting is Nearly Universal," 2012; Thomas & Orthober, 2011; "U.S. Teen Mobile Report," 2010;). By ignoring students' crucial side of this dialogue, authenticity is not being achieved, according to Freire's (1993/2013) belief that "authentic education is not carried on by 'A' *for* 'B' or by 'A' *about* 'B,' but rather by 'A' *with* 'B,'" (p. 160). This dialogue must be opened to the teens that so badly want to use their phones for all of their daily activities, including their own education. Instead, the dialogue seems to be one-sided, like much of the data-driven instruction going on in secondary school classrooms.

Much of the one-sided conversation stems from schools full of educators willing to put too much power in the negative possibilities of technological devices (classroom distractions, cheating, cyber-bullying, etc.) to the extent that the negatives seem to immediately and irrevocably outweigh the positives (peer-to-peer communication, instant access to information/apps, engaged students, etc.). The negative aspects of technology can provide learning opportunities for all parties involved, and they must be considered. However, Freire (1993/2013) argues "These views, impregnated with anxieties, doubts, hopes, or hopelessness, imply significant themes on the basis of which the program content of education can be built" (p. 160), but warns that we cannot be so naïve to present to our students a model of education that does not consider the multiple viewpoints of any particular subject.

The rapidly changing world of technology is undoubtedly going to present ever-changing challenges to educators, but today's "digital natives" (Prensky, 2001, p. 1) must be allowed to be part of the dialogue that shapes the education we are planning to deliver to them. Any other method would present them with "a program whose content we have

ourselves organized" (Freire, 1993/2013, p. 160) without consideration of the present world, the personal viewpoints and the critical thinking and learning needs of today's students.

The Four R's

William Doll (1993/2013) suggested replacing curriculum's original three R's ("Readin', 'Ritin', and 'Rithmetic") with four R's (Richness, Recursion, Relations, and Rigor). His suggestion originates from wanting education to be more modern than the purpose served by the three R's of the late nineteenth century, where schooling had the purpose of preparing students to become workers in a "developing industrial society" (Doll, 1993/2013, p. 215).

The explanation provided in the exploration of Doll's (1993/2013) R for "Relations" includes a belief that modernism's strong focus on individualism, and its desire to progress learning through the use of competition, needs to be combined with an understanding that "relationships extend beyond our personal selves to include the ecosystem—indeed the cosmos in which we live" (Doll, 1993/2013, p. 220). The 21st century ecosystem we currently inhabit has schools that are struggling to reflect their surrounding landscapes in a rapidly evolving technological world.

Technology is challenging the way we view education and making us ask how education is supposed to look. With mobile devices like tablet computers and cell phones becoming a presence in nearly all aspects of life, it is no surprise that these devices are also permeating the classrooms of America's schools. So, as devices push their way in, schools are competing to figure out the best ways in which to include these portals of

communication and knowledge into curricula that were clearly designed without them in mind.

In this interpretation of Doll's local and global landscapes, the *local landscape* is the traditional school that was designed without technology in mind but is attempting to integrate devices (laptops, iPads, etc.) in its own way and on its own terms. The *global landscape* is that of the teenaged mobile technology owners of the world, who always carry devices with them, even into classrooms that often discourage their use. These two landscapes are on a collision course in American schools, and when they finally meet, schools must be prepared to accept the results of the collision.

Collins and Halverson (2009) note "the convergence of peer and popular culture through technologies presents possibly the largest threat (and opportunity) for schools and parents" (p. 125). Teenagers have technology in their hands. Are schools going to recognize the necessity of, as Doll (1993/2013) puts it "realiz[ing] that our local perspectives integrate into a larger cultural, ecological, cosmic matrix" (p. 220)? Rather than fighting the incorporation of Personal Electronic Devices (PEDs), schools need to quickly recognize teenagers' desires to be constantly connected to their world. The progress of our educational systems may well "depend on our ability to bring these two perspectives (local and global) into complementary harmony" (Doll, 1993/2013, p. 220).

State of Civilization

Fill in the blank at the end of this thought: "Many people who have worked in and with schools note how the system stubbornly resists changes to its core practices. The conserving power of schools protects the core practices of teaching and learning from the distracting, or even dangerous, consequences of _____" (Collins & Halverson,

2009, p. 30). Given the option to respond freely, educators could fill in the blank with countless items that accurately complete the statement. If directed more pointedly, say with multiple-choice options, it may still be difficult to choose a correct response due to the fact that so many school systems are so conservative and resistant to change.

Imagine the opening statement with the following phrase filling in the blank: "cell phones and mobile technology." What issues exist? Technology enthusiasts foresee a future that involves all sorts of mobile and Personal Electronic Devices (PEDs) as a staple of classroom instruction (Collins & Halverson, 2009; Prensky, 2010; Richardson, 2014). However, technology contrarians, and those resistant to changes to the way things currently are, say that "the basic material tools for schooling are paper, pens, pencils, and chalk" (Collins & Halverson, 2009, p. 33). Collins and Halverson (2009) acknowledge that technology skeptics go on to show "These tools are very adaptable to a wide range of community environments and well suited to the symbol manipulation, recitation, and recall involved in many curricula" (p. 33). It could be argued that educators who hold these views are *technonormative*.

John Dewey (1929/2013), in his *My Pedagogic Creed*, astutely claims that "knowledge of social conditions, of the present state of civilization, is necessary" (p. 34) for the education of students. Current social conditions are clearly different than those of the Industrial Revolution school systems developed to provide learners with traditional knowledge. Today's learners are part of ever-evolving communities. Perhaps an increasing awareness of modern issues will pressure schools to reconsider their *technonormative* stance on curriculum design, allowing schools and educators to fill in the blanks with responses appropriate for the present "state of civilization."

Conclusion

Contemporary technologies are still evolving, but 21st century classrooms hardly resemble the world their students inhabit when they are not at school. The fact that schools are progressing more slowly than the technologies around them is not lost on educators, and studies indicate that many educators support shifting the balance of being wary of technology in classrooms to embracing its potential. Progressive-minded educators are working hard to develop plans and procedures to allow the seamless incorporation of today's ubiquitous devices, but teachers, pedagogy, and methodology lack preparedness for the current influx of mobile devices.

CHAPTER 3

ACTION RESEARCH METHODOLOGY

Introduction

This chapter presents the methods that were used to implement this action research study. Chapter Three is organized into the following sections: (a) purpose of the study, (b) statement of the problem of practice, (c) research design (including a field site description), and (e) conclusion.

The present action research study examined the perceptions of teacher-participants at Jackson High School (JHS) [pseudonym], a rural high school in northwestern South Carolina or what is regionally known as the Upstate. Teacher-participants' perceptions on integrating Personal Electronic Devices (PEDs), primarily smart phones, into their classrooms were analyzed. The purpose of this study was to determine the teacher-participants' perceptions so they could be used to formulate an action plan that may be used by JHS teachers and administrators to inform future decisions about teacher-participants' needs regarding PED allowances, expectations, and classroom integration.

Statement of The Problem of Practice

The policy for student use of personal electronic devices (PEDs) in class at Jackson High School [pseudonym] is inconsistent and intermittently enforced, leaving teachers and students with no consistent structure for when and how they can use their PEDs in their classrooms. Some teachers use PEDs as a pedagogical and curricular

tool. A systemic investigation into the study of PEDs at Jackson High School informed an Action plan that may help establish a protocol that is a compromise for all to move forward as technology rapidly changes throughout the twenty-first century.

Research Question

The following research question was addressed as part of this action research study:

1. *What are high school educators' perceptions of students' use of PEDs in the classroom?*

Purpose of the Study

The primary purpose of the present action research study was to describe Jackson High School teacher-participants' perceptions regarding the integration of personal electronic devices in their classrooms for curricular and pedagogical use. Specifically, the participant-researcher will describe the perceptions of JHS educators who use PEDs in their classrooms. JHS is a rural high school located in the upstate of South Carolina and most students have PEDs. A secondary purpose of the research is to describe some of the ways in which JHS teacher-participants utilize PEDs in their classrooms. Teacher-participants' experiences, approaches, and levels of expertise with incorporating PEDs in curriculum and pedagogy will be described. These different approaches will be described in detail in this dissertation to provide a template for JHS teacher-participants' needs in order to increase student participation, engagement, and scholarly achievement.

Action Research Design

Plan for data collection

The present research utilized qualitative data gathered from semi-structured interviews. The semi-structured interview questions were informed by responses gathered from a digital survey teacher-participants completed via Survey Monkey (see Appendix A for full survey). A group of six researcher-selected teacher-participants participated in one-on-one, face-to-face, semi-structured interviews with the participant-researcher.

Data collection occurred during the first nine weeks of the fall 2016 semester. Teachers were invited to become teacher-participants in the present research via an email invitation to the PED survey. The survey responses were anonymous, though I required my teacher- participants to submit their name to me after completing the survey so that I would know which individuals were eligible to participate in the semi-structured interviews.

After distributing the survey, I allowed approximately twenty days for teachers to complete the survey, at which time I reviewed the data and selected a group of six teacher-participants to take part in the semi-structured interviews. Teacher-participants remained anonymous, and I selected a sample that accurately represents the diversity of the faculty at JHS.

Semi-structured interviews occurred during weeks six through eight of the fall 2016 semester (see Appendix B for the full Research Planning Schedule). Interviews were voice-recorded for later transcription, and all recordings were password protected on my personal computer. Additionally, I collected observations on a Field Notes

document (see Appendix C) during the interviews. I began the semi-structured interviews with a few base questions before allowing the teacher-participants to do most of the talking. Additional questions were derived from the answers of teacher-participants, though I had a list of guiding questions that I asked if the conversations lost focus.

Data analysis occurred through a review of interview transcriptions and a reflection on the overall results of the initial survey. Results of the data analysis led to the development of an action plan which was developed by the participant-researcher, in conjunction with the

teacher-participants, during the winter of 2016-2017 and explained in chapter five of this dissertation.

Action Research.

As mentioned in Chapter One, this study was conducted with the use of action research. Action research exists in varying forms, though the cyclical nature of the research process is consistent among them. This particular study used Mertler's action research design. The following information will clarify the four broad stages and nine specific steps of the action research process defined by Mertler (2014) in his book *Action Research: Improving Schools and Empowering Educators*, but it should be noted that the nature of action research is for the plan and process to evolve, overlap, and change as research progresses. According to Herr and Anderson (2015), "stages [of action research] often overlap, and initial planning may quickly become obsolete as learning informs the development of the question and the process (p. 89). Additionally, Herr and Anderson (2015) point out that there are parts of action research over which "the researcher may

have little control" (p. 89). Considering this information, along with Mertler's defined action research cycle, it is paramount to the present study to recognize the basis of the structure of action research, but also to rely on the fact that the plan will likely change as the present research is carried out.

Stage one: planning. The planning phase of an action research project consists of four steps. These are the steps completed before the implementation of the action research study (Mertler, 2014). By completing these four steps, I will be positioning myself to execute my research plan. The planning stage is critical to project development, and has more steps than any other stage in Mertler's process. It is imperative to have a solid foundation of what the project is about and the problem it seeks to solve before embarking on a lengthy study.

Step 1. Identifying and limiting the topic. Any time any type of research is performed, the initial step is finding a topic. Without knowing specifically what is to be studied, all other steps of the process are useless. With action research, identifying the topic lies very personally within the educator conducting the study. Mertler (2014) suggests that topics may be "anything about which you are curious, that piques your interest, or that intrigues you in any way" (p. 39).

As an avid fan of technology and gadgets, I have always been interested in how the devices are revolutionizing the ways in which we, as a people, communicate and interact. The rapid evolution of personal technologies, such as laptops, tablets, cell phones, and other similar devices, has altered not only the structures and challenges of secondary schools, but also the ways in which teenagers communicate and interact with one another on a constant basis. By combining my interest in these devices with the

obvious need to investigate how the advent of such devices is changing the landscape of secondary education at JHS, I identified and began to limit my topic for this action research study.

Step 2. Gathering information. After identifying my topic, it was time to begin the initial process of information gathering. Mertler (2014) uses the term "reconnaissance" to describe the process of gathering information (p. 39). By performing reconnaissance, an action researcher can be doing things "as simple as talking with other teachers, counselors, or administrators [in their] school or district in order to gauge their perceptions of [the] proposed research problem" (Mertler, 2014, p. 39).

As I considered my topic, one of the things that kept coming to the forefront of my mind was my school's rapidly evolving policies regarding the use of what my district calls "Personal Electronic Devices" or PEDs. I took some time to speak with various members of my school's faculty and staff in order to perform "reconnaissance." I found out that there is a need for understanding why teachers behave so inconsistently in regards to PED use in their classrooms, and for an understanding of why the policies are seemingly constantly changing.

This step in the action research process goes further than simply gathering information. Information gathering "takes three forms: self-reflection, description, and explanation" (Mertler, 2014, p. 39). By tackling the three forms labeled by Mertler, the topic takes shape. First, the self-reflection allows for an understanding of personal beliefs and values about education in general and about the chosen topic in relation to education, more specifically. Exploring the historical context of the evolution of

technology integration in schools and my own personal history with technological devices also helped to narrow the topic of my study.

Description, the second form of reconnaissance described by Mertler (2014), is completed by focusing "on the *who*, *what*, *where*, *when*, and *how*" (p. 60) of the research problem. I considered these focus items and allowed myself to further clarify the research problem. The most difficult part of this what deciding on *who* to study: educators or students. This was particularly difficult, because the issue at hand involves both. I decided to focus on the educators because I am an educator, and by performing an action research study, I hope to refine and improve my own practice, and the methods and practices of those around me. The *what* (technology integration), *where* (my school, Chapman High School), *when* (during classes and at school), and *how* (the ways we a currently integrating/allowing PED use) were not as difficult for me to identify.

The final form of reconnaissance, explanation, is an attempt to articulate "why" this problem is occurring. At this point, the issues surrounding technology integration in schools seems to heavily revolve around a lack of understanding of the technologies themselves, but also around the fact that many educators are simply unwilling or unprepared to accept the changes that will come along with the PED integrations that seem, to this researcher, necessary in the progression of secondary schools.

Step 3. Reviewing related literature. Traditional research and action research utilize reviews of related literature, and to the same extent. Reviewing literature related to the topic of study allows the researcher to connect available information, including existing research and theory, on the chosen topic to their own classroom practice and experience (Mertler, 2014). My literature review focused largely on the use of text

messaging in the classrooms. This is due to the fact that the use of PEDs by students in secondary classrooms is overwhelmingly for the purpose of text messaging. Additional literature was reviewed on newly developing aspects of technology integration and the ways in which educators and schools are dealing with this evolving situation.

Step 4. Developing a research plan. In traditional research, the research involves developing a hypothesis, or expected answer to the research question (Mertler, 2014, p. 40). In action research, "hypotheses are seldom used" (Mertler, 2014, p. 40) due to the framing of the research question(s) as the topic(s) being investigated. "The fundamental question inherent in the research problem . . . is *the* question the action researcher seeks to answer through conducting the study" (Mertler, 2014, p. 40). By knowing the research question, the researcher can then decide on the specifics of what data is needed to answer the question and how that data can be collected (Mertler, 2014, p. 41). In this study, a qualitative approach was necessary since data was qualitative.

In addition to determining the data collection method, part of the research plan (Appendix B) was considering the ethics of the study. "Research ethics deal with the moral aspects of conducting research, especially research involving human beings" (Mertler, 2014, p. 41). Since this study involved the use of human subjects, care was taken to abide by the standards of research regarding issues such as honesty, transparency, and fairness, among others.

Stage two: acting. The second stage of Mertler's (2014) action research protocol is the actual implementation of the study and the collection of data (p. 36). During this stage, I executed the research plan that I developed in stage one. By conducting the

research, gathering data, and analyzing the data I moved the action process forward and closer to determining the answers to my research question.

Step 5. Collecting data. My primary sources of data will be qualitative and will derive from observations and interviews. Mertler (2014) notes, "Observations, as a means of collecting qualitative data, involve *carefully* watching and *systematically* recording what you see and hear going on in a particular setting" (p. 127). This type of data has the benefit of being useful when quantifiable methods simply will not work, such as checking "for students' nonverbal reactions to something that is occurring in the classroom" (Mertler, 2014, p. 127). Additionally, this type of data gathering offers the benefit of being able to keep the research setting as natural as possible for students so that observations are as accurate as possible. Dick and Swepson (2013) emphasize this by stating, "Most of the time action research uses natural language rather than numbers: the use of natural language suits a paradigm which is participative and responsive to the situation" ("Can Action Research Be Quantitative," para. 2).

It is necessary to recognize that there are drawbacks to qualitative data gathering and analysis. If the teacher is not as objective as necessary or the students act or respond unnaturally due to the fact that they know they are being observed, qualitative data may be inaccurate or useless to the researcher. If qualitative data are not reliable, valid, and credible, the data may not fit the purposes of the action research being conducted and the entire process will have been wasted time for all involved.

Step 6. Analyzing data. M study will require the collection and analysis of qualitative data. To analyze the qualitative data, I will use the method of inductive analysis. Mertler (2014) describes inductive analysis as a "process of logically analyzing

qualitative data in order to reduce the volume of collected information, thereby identifying and organizing the data into important patterns and themes" (p. 308). By identifying the themes and patterns presented by the qualitative data, I was able to draw conclusions to support my findings and ultimately answer my research question.

Though my primary data collection consisted of qualitative data, I understand that future cycles of research may require a need for quantitative data collection and analysis. The analysis of the data, whether descriptive, inferential, or inductive would help to answer key questions based on future research needs, which ultimately, is the goal of the entire action research process.

Stage three: developing. Stage three of the action research plan Mertler describes is a stage and step in and of itself, and is the part of the plan where "action" research derives its name. Mertler carefully defines this stage and extrapolates the importance of why stage three stands alone as a one-step stage in the action research process:

This stage consists primarily of taking the results of your data analysis, your interpretations of those results, and the final conclusions drawn from the interpretations and formulating a plan of action for the future. This action plan may consist of strategies for the future implementation of the treatments, interventions, revisions and improvements to your instructional methods, and other items that were incorporated into your study and also may consist of designs and proposals for future action research cycles or perhaps a combination of both. (Mertler, 2014, p. 210)

Step 7. Developing an action plan. After analyzing the data collected during my study, I drew conclusions about what to do next. No immediate changes were deemed necessary, though future cycles of this research may operate differently after the action

plan is implemented. Since my study focused not just on my classroom, but on my school, the study led me to discover ways in which the entire school can take action to improve the policies already in place, thereby using my conclusions to enact a school-level action plan to improve the practice of technology integration at Jackson High School.

Stage four: reflecting. Sharing the results of an action research study "either formally or informally—is the real activity that helps bridge the divide between research and application" (Mertler, 2014, p. 245). By communicating the results of a study, the educational community is granted the opportunity to benefit from the researcher's work. Possible criticism of the work could occur, but that criticism should be taken by the researcher as part of the research cycle, ultimately adding to the information gathered along the way that is intended to lead to an improvement of practice.

Step 8. Sharing and communicating results. My study is not confined to just one classroom, and the results of my study will not be isolated, either. Conclusions drawn from my work have been communicated with teacher-participants and will be communicated with my colleagues and administrators at both the building and district levels. My hope is that the findings of my research will shape the policies of technology integration across my district by providing sound data analysis and informed decisions about current and projected PED usage, and the ways Jackson High School's faculty perceives them in relation to classroom integration.

Step 9. Reflecting on the process. "Action research is becoming a popular approach to studying complex social situations such as those found in educational settings, where the focus is on simultaneous enquiry into practice (generating knowledge)

and action to improve situations (e.g. designing new curricula or learning activities) (Swinglehurst, Russell, & Greenhalgh, 2008, p. 385). A large part of the action research cycle that leads to the aforementioned improvements is the reflection of action researchers (in other words, the teachers looking to improve their practice). Mertler (2014) identifies reflection as a step that "provides opportunities for reflecting on where your action research has taken you, reflecting on what you have learned from engaging in action research, and – although it sounds like an oxymoron – reflecting on where your action research can take you as you move forward (p. 214). I believe that professional reflection, as part of an action research cycle or not, is imperative in the improvement of any educator. In terms of action research, however, it is a step that is as necessary as the question that began the inquiry. Without reflecting on the process, the methodology, and the results, the desired improvement of practice is unlikely to occur.

Two particular methods of reflection, according to Mertler (2014), are necessary to fully reflect on any action research project. This first method is to consider the outcomes of the study, analyzing the intended outcomes and the unintended outcomes with the purpose of "planning future professional development" (p. 220). The second method requires the researcher to reflect on the action research study itself, carefully analyzing the methods used to complete the study. If a practitioner carries out both methods of reflection, the study will likely evolve throughout its multiple cycles, as action research is wont to do, and ultimately, the results will be stronger and more reliable than the results of a study that lacks purposeful reflection.

Interview Plan/Interview Guide

After analyzing survey results and determining a few guiding questions, I organized one-on-one interviews with a diverse selection of willing participants for my semi-structured interviews. The interviews started with questions intended to give interviewees as much chance as possible to be descriptive and open about their perceptions of mobile devices in classrooms. When possible, I asked one prepared question, with any other questions being follow-up questions based on the information the interviewees provide during their responses to the initial question (or other follow up questions).

Initial question:

- How do you feel about students using cell phones during your class?

Possible guiding questions (if needed for redirection):

- Do you view cell phones as a discipline problem?
- Have you intentionally planned for students to use their cell phones in your class?
- Do you perceive cell phones as potentially powerful learning tools?
- Do you agree or disagree with the school's current cell phone rules for students?
- Do you ever use your personal cell phone during class? For personal use or for class related use?
- Do you feel that misuse of technology is the technology's fault?
- Should possible misuses of technology preempt the use of these devices in classrooms?

Interview Transcription Plan

I audio recorded my semi-structured interviews. I also took notes during the interviews. I used my shorthand and longhand notes, along with my audio recordings, to transcribe the interviews. All interview recordings, notes, and transcriptions were password protected on my personal devices so that participants' anonymity was constantly protected.

Action Research Data Collection Journal

While conducting my semi-structured interviews (which were digitally recorded), I kept field notes (Appendix C). Observations, insights, trends, and unusual findings were recorded on field note observations pages. These field notes were scanned so that I will have secure digital PDF copies; the originals were then stored in a notebook in a locked closet. A field notes document was used for my observations and findings.

Research Ethics

Every individual who took part in this study participated on their own accord (see Appendix D for Teacher-Participant Consent Form). Every teacher who chose to participate was given a chance to discuss the study with me regarding any personal questions or concerns they may have had regarding data collection or any other aspect of the research.

Each teacher selected for semi-structured interviews was assigned a pseudonym so that anonymity would be ensured throughout data collection and the dissemination of research results. All audio and video recordings and interview transcriptions were securely protected in either a locked closet or on a password-protected computer or

mobile device. I was the only person with access to the data that was collected. Confidentiality was of the utmost importance for the duration of the study.

Reflection Plan

Results of this study were shared with the teacher-participants, school administrators, and district-level technology-integration personnel. Findings were used to determine what changes, if any, were needed in regards to school and district policies regarding PEDs in classrooms.

Research Site

This action research study was conducted Jackson High School, a rural high school in northwestern South Carolina. The school is fully accredited by the South Carolina Department of Education and the Southern Association of Colleges and Schools Council on Accreditation and School Improvement" ("District Profile, n.d.). Jackson High School educates students in grades 9-12 and currently has an enrollment of 910 students and a faculty of approximately 80 teachers, including one principal and three assistant principals.

Conclusion

Herr and Anderson (2015) recognize that traditional researchers often frown upon action research when they say, "epistemologies and methodologies that involve participants and are capable of responding to local realities and needs are sometimes insufficiently recognized" (p. 121). I agree with Herr and Anderson, however, in that "unlike traditional research, action research produces knowledge grounded in local realities that is also useful to local participants" (p. 121). There is no denying the benefit of carefully performed action research. The subjects of the research and the researcher

himself stand to benefit greatly from the knowledge acquired through this type of study. Having actively engaged in the research process, I can provide first-hand information to my school and my district regarding teachers' perceptions of PEDs and their integration into classrooms and curricula. My conclusions, which will be presented in chapter four of this dissertation, will shape the future of JHS's technology integration policies, with the ultimate goal of increasing student participation, engagement, and scholarly achievement.

CHAPTER 4

FINDINGS AND IMPLICATIONS

Introduction

Chapter Four presents the findings of the present qualitative action research study that was conducted to determine secondary educators' perceptions of students' use of Personal Electronic Devices (PEDs) in classrooms. A survey regarding these educators' perceptions of PEDs in their classrooms was administered via email during the first month of the fall 2016 semester at Jackson High School (JHS) and the survey results were used to inform questions for follow-up semi-structured interviews with six researcher-selected teacher-participants. Teacher-participants' perceptions were analyzed using summative data analysis techniques (Mertler, 2016). The broad theme of a lack of professional development regarding technology integration in classrooms can be seen in information gathered during this study's data collection, during which teacher-participants consistently mentioned concerns that can be categorized in the patterns of control, cheating, preparation, fear, responsibility, and frustration.

The purpose of Chapter Four is to describe and interpret these findings and to discuss their implications. In review, the current study's problem of practice addresses the inconsistent use of PEDs in JHS classrooms. Teachers are unsure when and how to incorporate the ubiquitous technology, leading to the research question: *What are high school educators' perceptions of students' use of PEDs in the classroom?* The purpose of

the study is to determine JHS educators' perceptions on PED use for curricular and pedagogical use. Next, details concerning the findings of the study are presented, followed by an interpretation of results, including patterns and themes found during data analysis. Finally, a summary of findings and implications is presented in the Chapter's conclusion.

Findings of the Study

This Action Research study, aimed at determining educators' perceptions on the use of PEDs in their classrooms, began with a survey created and administered by the participant-researcher who is a teacher at the high school. I teach students in grades nine through twelve and have worked in the School since 2000. Of JHS's 75 faculty members, 44 responded to the anonymous survey distributed via SurveyMonkey in August 2016. The results of the survey provided a large-scale overview of these educators' views about technology integration and mobile device usage in their classrooms and was used as a point of departure to further investigate the ways in which PEDs are utilized and incorporated into curriculum and instruction.

After distributing the whole-faculty survey, six educators were selected and asked to participate in semi-structured interviews based on a follow-up request. Of the 12 teachers who responded to the request for an interview, six teachers were selected because they represented the spectrum of demographics of the faculty members at the school. Considerations taken when selecting teacher-participants included years of teaching experience, age, degree of educational attainment, subject(s) taught, and gender. In the following sections of this Chapter, each of the six teacher-participant are identified with a pseudonym, his or her demographics are described, and his or her perceptions of

mobile devices in his or her classroom are discussed. Following the explanations of the teacher-participants' demographics and individual perceptions, overall themes are identified by the participant-researcher in order to provide a summative analysis of the data collected during the semi-structured interviews.

Teacher-Participants

After my anonymous survey, teachers at JHS were asked via email to contact the participant-researcher if they were willing to participate in a face-to-face follow-up semi-structured interview. The request was sent to all JHS faculty since the participant-researcher did not know who completed the SurveyMonkey survey. Twelve teachers responded to the interview request. Of the 12 respondents, the six that were selected were chosen based on the diversity of their demographics and the diversity of the academic subjects they teach. The participant-researcher did not have prior knowledge of the teacher-participants' perceptions on PEDs, nor the teacher-participants' current individual classroom policies regarding PEDs.

Six teacher-participants were chosen to participate in semi-structured interviews regarding their perceptions of mobile devices in their classrooms. Of the six teacher-participants chosen, three are men and three are women. The years of experience for the teacher-participants range from a first-semester, first-year teacher to a teacher with 31 years of prior teaching experience. Additionally, the subjects taught by the interviewees cover most of the departments offered by JHS, including social studies, math, English, foreign language, science, and Career and Technology Education (CATE). Teacher-participant interviews each occurred after regular school hours in the participant-researcher's classroom. The location was agreed upon by the participants before the

interviews occurred. Each interview was digitally voice-recorded and the participant-researcher maintained security of the interviews as well as sole access to the interviews during and after the data collection period.

First Interview.

Demographics. My first semi-structured interview was with 37-year-old science teacher Brian Boyd [pseudonym]. Mr. Boyd holds a master's degree and has 16 years of teaching experience prior to the 2016-2017 academic year. He currently teaches chemistry, biology, physical science and AP Physics. His current students are in grades 9, 10, and 11.

Perceptions. Mr. Boyd believes that his students primarily use PEDs to engage in social media with their peers. He does not believe that students view mobile devices as educational tools. He currently uses a "zero cell phone policy" in his classroom and believes, since the advent of our schools' 1-to-1 Chromebook distribution, that "anything needing to be done for my class on a cell phone can now be done on a Chromebook" (personal communication, September 28, 2016). Mr. Boyd notes that before all students had Chromebooks that he did occasionally let students use cell phones in his class, but now he feels that there is no need for the cell phones.

Mr. Boyd's primary concern with PEDs is that in his experience, students do not act responsibly when using the devices. He acknowledges that the devices are engaging and that he believes without question that there is a place for these technologies in classrooms. He adds, however, that students have not yet proven that they can use devices for only academic purposes, and that "cell phones require constant monitoring

[by the teacher] to make sure they [the student-users] stay on task" (personal communication, September 28, 2016).

Students using PEDs to cheat on assignments is another major concern for Mr. Boyd. He does not believe that the devices themselves encourage cheating in and of themselves, but he believes cell phones make cheating easier for students. This concern is particularly notable since Mr. Boyd harbors the belief that academic achievement is the only reason PEDs should be allowed in classrooms.

Another concern for Mr. Boyd was the rapid changes occurring with technology integration in classrooms. He believes that technology is sometimes being forced upon teachers because there is a public awareness that the technologies exist and a district-mandated expectation that we please the public by utilizing devices in our teaching.

Despite a couple of major concerns, Mr. Boyd considers himself to be a proponent of technology in the classroom. When asked about how he views where we are a school with technology integration, and where he thinks we need to go with our policies in the future, he had this to say:

> I think where we are now is perfect. If we keep going further, we may reach a point where outsiders think technology is the only thing we are doing. Students still need personal interaction—not everything can be through a keyboard. Some things can't be replicated by virtual labs. I feel like the philosophy should not always be "What's next? More, more, more." Education has the habit of having a "flavor of the month" mentality. Sometimes we need to just stick with one thing. Every school is going to have teachers who are 'pro' these movements and against these movements. What it comes down to is whether or not teachers can get

> results. That should be the main concern. Coming from someone who is pro-technology in the classroom, the technology doesn't matter if you can get positive results without it. Sometimes I wonder if school districts implement these programs [technology initiatives, like 1-to-1 Chromebooks] to get in the paper or to get student results. (personal communication, September 28, 2016)

Second Interview.

Demographics. My second semi-structured interview was with 54-year-old Spanish teacher Kay Waldrop [pseudonym]. Ms. Waldrop holds a bachelor's degree (plus 18 hours) and has 31 years of teaching experience prior to the 2016-2017 academic year. She currently teaches Spanish 1, Spanish 2, Spanish 3, and Spanish 4. Her current students are in grades 10, 11, and 12.

Perceptions. Ms. Waldrop believes that her students primarily use their mobile devices for social media and texting. She currently employs a zero-tolerance cell phone policy in her classroom that requires students to place their phones in a numbered "cubby" at the start of each class period so that they may not have access to them at all during her class. The primary reason for her policy is that her previous experience proved that students frequently used their phones as "translation devices" in her foreign language classroom. She is "trying to get them to learn to speak a language, not learn how to look up a machine's translation of the language" (personal communication, October 11, 2016). Ms. Waldrop firmly believes that teachers should be able to completely deny students the ability to use technology in class, even though school and district mandates encourage teachers to integrate technology into their lessons.

I asked Ms. Waldrop to explain more about her policy of students relinquishing their phones upon entering her classroom. She confirmed that student cheating and constant distractions caused by the phones were the primary reasons for implementing her rule. She emphasized how hard learning a new language is even without the distraction of students being "glued to their devices." I asked her if students still tried to cheat even without their phones, and she answered in the affirmative. "[Cheating] is the fault of the student; discipline is discipline, cheating is cheating. It is not specific to the devices. Yes, they cheat without them. But, the devices make it easier." She equates the issues to students using calculators in math on assessments that do not allow the use of calculators.

Students want to use translators as a crutch. Ms. Waldrop said the students' dependency on technology has even gone so far as students telling her she is wrong as the teacher because Google Translate gave an answer that she as the teacher would not accept. One specific example Ms. Waldrop provided involved a student translating the word "produce" as part of a sentence. The word was intended to be used as a verb, as in "to produce" something. The student typed the word into a translator app and was given the meaning of the noun form of the word "produce," as in a fresh fruit or vegetable. The student used the translated noun form as a verb in her Spanish translation and then argued with her teacher without considering the error the part of speech played in the incorrect translation. Ms. Waldrop also notes times that she, as a fluent speaker of Spanish, has been told by her app-using students that her use of the language is wrong according to their technology.

Though she has a firm rule against cell phones, and though she has a lengthy career of teaching her content without technology, Ms. Waldrop is trying to adapt her curriculum and her practices to incorporate JHS's recent adoption of Chromebooks. "I agree with the need for change. We have to figure out how to connect with kids who have grown up with cell phones and digital technology" (personal communication, October 11, 2016). She sees problems with the current state of technology integration, however. "There are more cons than pros for my classes. I've tried Google Classroom and other suggested apps and platforms, but the immaturity [of the students] still exists. [The technology] is too distracting for them [the students]. They can't stay off of YouTube and social media. My experience shows me that they will always take the easiest route to doing what they want to do" (personal communication, October 11, 2016).

Ms. Waldrop is a team player and wants to try to integrate technology according to how successful JHS and our school district believe classrooms can be with proper integration. Her attitude is positive about the potential of technology, but her experiences tell a different story. She has not experience much success with devices of any type, and until her students can prove that they can use the devices responsibly, her stance does not figure to change. I asked her how she thought we should teach students responsible use and she said:

> I don't know. It's where we're going, I guess—mobile devices—it could be beneficial, but we are not dealing with children that are at the level of using responsibly. Maybe when students start getting them earlier [at younger ages/grade levels] and a focus can be put on their parents and elementary teachers

showing them what to use devices for in school. I have no idea what to do. Why can't we engage them using technology without all the distractions? (personal communication, October 11, 2016)

Ms. Waldrop's parting thoughts were about the rapid evolution of technology and the rate at which teachers and schools are expected to keep up. "Something new is always coming along. Things are changing so quickly. Catching up sounds good to me. Let's work hard at trying to help children [appropriately] use what we have now before replacing it with something else" (personal communication, October 11, 2016).

Third Interview.

Demographics. My third semi-structured interview was with 22-year-old math teacher Valerie Bateman [pseudonym]. Ms. Bateman holds a bachelor's degree and has 1 year of teaching experience prior to the 2016-2017 academic year. She currently teaches Algebra 1. Her current students are in grade 9.

Perceptions. Ms. Bateman's perceptions on mobile devices and how her students are using them are similar to the first two interviewees. She believes that the recent adoption of Chromebooks at JHS has eliminated any need for students to have cell phones in class. She believes that when her students have their phones, they are using them completely for non-academic purposes, such as texting and engaging in social media.

Ms. Bateman has a no-cell phone policy in class and believes it would be beneficial to have a blanket policy for our school regarding student use of cell phones. She believes an across-the-board policy would help establish routines for students and that concrete disciplinary actions established by administrators, not classroom teachers,

would help students understand the seriousness of the misuse issues that are frequently seen in classrooms. Though she believes a school-wide policy would be beneficial, she does not believe JHS's current teacher-by-teacher policy negatively impacts her classroom or her ability to manage technology in her classroom.

Ms. Bateman believes that it is easier for her students to cheat using technology. She believes that students will cheat even without technology, but notes that students are so savvy with technology that they quickly and easily find ways to use it to their advantage. She provides examples of students looking up answers on websites that specialize in "homework help" by giving answers to math problems from specific textbooks that can be looked up by name to students taking photos of problems/questions/quizzes with their phones and sending them to other students either for help or to show them what to expect on their upcoming tests.

When asked if the restrictions placed on students regarding technology use in schools represents real-world expectations, Ms. Bateman said, "Not all students can handle 'free-range' use of mobile devices." She explained that in her experiences, adult users of cell phones and mobile technologies are afforded certain freedoms because they are expected to use the technologies appropriately and responsibly in all situations. Her high school students have not shown that they exercise those traits when using technology, leading her to believe that more needs to be done to prepare students as responsible users. She adds, however, "Some students just aren't going to learn to do it properly" (personal communication, October 11, 2016). She likens this to the fact that some students just are not "good at" being students in general. They break rules. They do not fear consequences. They make classroom management difficult. It has nothing to

do with whether or not they *can* use technology appropriately, it has to do with whether or not they *will* use technology appropriately.

Since students do not use technology in the ways Ms. Bateman deems appropriate on all occasions, she defers to rules, lessons, and plans that suit her needs and her teaching style. She says that she prefers Chromebooks over smart phones now that we have 1-to-1 at JHS, stating that the Chromebooks give her more "control." "They're school property. The screens are bigger. They are just easier to monitor" (personal communication, October 11, 2016).

When asked to look ahead and predict where she sees technology integration and mobile learning going in the future of her classroom, Ms. Bateman says, "There needs to be some progression in the form of the classroom. They've been basically the same for 200 years" (personal communication, October 11, 2016). She adds that she is starting to see the benefits of technology in the classroom, but emphasizes that she feels technology in the math classroom is different than it is in other classrooms because of the nature of her content. Students are not often needing technology to meet standards in math, and incorporating it just to incorporate it is unnecessary. She believes the benefits are there, but that more time is needed to properly plan integration and to properly prepare students to use the technology in appropriate academic ways.

Fourth Interview.

Demographics. My fourth semi-structured interview was with 55-year-old CATE teacher Scott England [pseudonym]. Mr. England holds a master's degree and has 11 years of teaching experience prior to the 2016-2017 academic year. He currently teaches economics and entrepreneurship. His current students are in grades 9, 10, 11, and 12.

Perceptions. Mr. England believes that his students spend time on their PEDs playing games, watching videos, and listening to music, though he admits that not all of his students are observed doing these things. His classroom policy is not a zero-tolerance policy like some of my interviewees, but he does frown upon the use of PEDs in his classroom due to students' inability to show maturity and responsibility in when and how they use their devices.

After Mr. England expressed what seemed to be a strong dislike for PED use in his classroom, I asked him if he believed teachers should be integrating technology into their curriculum. England said, "I can see some teachers in a 1-to-1 school not using technology, but not for an entire semester. I think they'd be denying themselves and their students some great opportunities" (personal communication, October 12, 2016). I asked him to provide some examples of the types of opportunities that teachers and students may miss, and he mentioned the benefits of technology being always connected and the positive aspects of being able to instantly find information, such as his entrepreneurship students being able to quickly and easily look up a television commercial he referenced during a class discussion. Without PEDs, students would not have had an opportunity to find and view that video right then and there, when it was on their minds and relevant to the current discussion.

Mr. England was very straightforward about being "one of the older teachers" and feeling like he was always behind when learning to use technology for his classroom. He sees the benefits of technology, but often wonders if he himself can manipulate the technology well enough to integrate it into his curriculum. "I want to learn. I want to ask questions. But some of the PD we get has teachers who are so far above some of us that

we're still trying to sign in when they've more much further ahead" (personal communication, October 12, 2016).

Mr. England, who coaches at JHS, continued to express his frustration with learning technology when he discussed how quickly things change and how rapidly we as teachers are asked to learn a new app or site or device. Using a coaching metaphor of practicing one thing time and time again until it is perfected, he said, "Too many new things come along too fast. Before a habit is created, a new thing is replacing [what we've been practicing on/with]. I hate asking other teachers for help because they are so far ahead of me" (personal communication, October 12, 2016). He expressed dismay about feeling "technology illiterate," even though he is trying to keep up with these rapid changes.

Mr. England does believe that technology easily enables some student misbehaviors, such as cheating and disrupting class. "They have no qualms about doing these things [gaming, watching videos, etc.] during class. They're not apologetic about it at all. Another thing is the earbuds. Kids won't take them out or put them away. It's a soft-skill issue" (personal communication, October 12, 2016). Mr. England insists that kids just hide behind their devices out of habit, and believes that they can be taught to use them maturely and responsibly. Though he believes it can happen, he does not have a plan for how to make it happen:

> We need to adapt. These phones are their lives. Threaten to take one and they get indignant. They fight tooth and nail. However, you [the teacher] need to be able to take one, to police that [behavior]. A teacher who doesn't try to adapt is falling behind, but they [the students] are definitely immature in the way that they use the

> tech. It's not used educationally. We can just give failing grades, but that's not the answer. A lot of them [students] don't want to be bothered with getting off of their technology. The bottom line is teens are defiant and always have been. I don't know how we can get that [accountability] to happen. (personal communication, October 12, 2016)

Fifth Interview.

Demographics. My fifth semi-structured interview was with 22-year-old English teacher Russell Smith [pseudonym]. Mr. Smith holds a bachelor's degree and the 2016-2017 academic year is his first year as a teacher. He currently teaches English 1 and English 2. His current students are in grades 9 and 10.

Perceptions. As a first-year teacher, Mr. Smith has relatively little experience in the classroom, but his perceptions on the use of PEDs were insightful and not altogether different than those of his more experienced colleagues. His current classroom policy regarding PEDs is that they should not be used while he is directly instructing, but if direct instruction is not occurring, they may be used with discretion. Mr. Smith believes that when his students are using PEDs for uses other than those he specifically defines, they are being used for social media, listening to music, and browsing the internet. He believes that each teacher should be allowed to make their own PED policy for their classroom.

Control is an issue for Mr. Smith—not just teacher control but also restrictive control of technology and device management from the school and district level. When asked about his thoughts on students using devices to access information not needed for class, he redirected the question to talk about how many restrictions are placed on

teachers and students, such as websites whose content has been blocked by web filters. Smith said, “Students can’t get to all the blocked sites and it ruins the purpose [of the technology]” (personal communication, October 12, 2016). He continued by saying that the restrictions must exist to a degree to protect student and teacher users, but that if the restrictions remain too stiff the true benefit of the technology will not be seen in the classroom.

Mr. Smith is concerned with the level of responsibility and maturity with which his students use PEDs in his classroom. He said:

> I try to teach by mentoring and modeling, including the use of technology. I try to set a good example. But there needs to be more than that. We shouldn’t just abandon the idea of taking phones away. Sometimes losing something makes you value it more. Right now, responsibility is not there for the students. It really is a matter of finding a way to get them motivated to do the right things with their devices. It seems like students rush to get things [their classwork] done just so they can get back to their games/videos/music [on their devices].” (personal communication, October 12, 2016)

Asked how we can combat this issue he sees with students’ unwillingness to separate from their devices and their inability to show responsible use patterns, Mr. Smith said, “If students don’t see value in what they’re doing, there’s going to be more chance for it not to matter to them. Make the work have value for them” (personal communication, October 12, 2016).

Sixth Interview.

Demographics. My sixth and final semi-structured interview was with 38-year-old social studies teacher Jodi Wallace [pseudonym]. Ms. Wallace holds a master's degree and has 13 years of teaching experience prior to the 2016-2017 academic year. She currently teaches AP US History, AP Human Geography, Government/Civics, US History (inclusion level), and Teacher Cadets. Her current students are in grades 9, 10, 11, and 12.

Perceptions. Ms. Wallace is a technology proponent, though admittedly not a tech-savvy teacher. She does not currently have a definitive cell phone policy for her classroom. She believes that there are pros and cons to having a school-wide cell phone policy: for teachers who want to utilize the devices, she believes a school-wide policy would place limitations on their creativity and their ability to fully use the technology. However, with a teacher-by-teacher policy, she believes that it is harder for individual teachers to enforce policies that differ from those of other teachers in the building since students do not have a consistent set of rules to follow regarding PED usage.

Ms. Wallace continued her thoughts on rules and policies regarding PEDs by saying, "It's a moral thing, not a technology thing. I don't think we should ban or restrict device usage at all. We need to teach them [students] how to use them [PEDs] appropriately" (personal communication, October 17, 2016). Her experiences have shown her that advancing technology is something to be excited about. Ms. Wallace said, "I think for the few that are going to use it [technology] inappropriately that that doesn't justify taking it away from everyone. Most kids are using them [PEDs] appropriately and enjoying being able to use them for school" (personal communication, October 17, 2016).

I pressed the issue of appropriate use and Ms. Wallace agreed that while she has not had too many disciplinary issues regarding device usage in her classroom that many students do use devices inappropriately in academic settings. She said:

> I don't feel like they [students] know when it's appropriate and inappropriate to use them [PEDs]. How do you teach them how to use devices appropriately? Aside from just telling them? I don't know. It seems like parents' responsibility for their own kids, but if it's not going to happen at home, it needs to start as soon as they [the students] start school. If schools are going to give them devices, they need to teach appropriate uses. I think it is something we can teach them. We shouldn't give up. We have to learn ways to make it work for us and for them. If we keep saying we don't have answers or we're not ready, the further behind we get. I don't want to call it a 'battle,' because that makes it seem like it isn't worth it—I think that it is worth it. (personal communication, October 17, 2016)

Interpretation of Results of the Study

The present action research study examined educators' perceptions of students' uses of PEDs in classrooms. Six teacher-participants completed semi-structured interviews with the participant-researcher regarding their perceptions. After an inductive analysis of the content of the semi-structured interviews, data revealed that the teacher-participants all share similar concerns regarding students' use of PEDs in classrooms.

The following patterns emerged during my inductive analysis of the interview data: fear, responsibility, preparedness, and control. Each of these patterns of teacher-participants' emotions and feelings about PEDs overlap and intertwine with one another, and they are both positives and negatives. They do reflect, however, the ironic struggle

that educators face trying to be creative and innovative in American public schooling while simultaneously being trapped by the corporate textbook and testing enterprise.

An analysis of each of the identified patterns is presented in the following sections, with detailed summaries and suggestions for future research being presented in Chapter Five of this dissertation.

Patterns

An inductive analysis of the qualitative semi-structured interview data gathered during this study revealed four important recurring patterns: control, cheating, preparation, fear, responsibility, and frustration. Each of the patterns can individually represent significant issues regarding educators' perceptions of PED use by students in their classrooms, but together they form a connected collection of positive and negative beliefs regarding the integration of PEDs into curriculum and instruction. Overall, these patterns point to a singular theme: the need for more professional development regarding the use and implementation of PEDs in JHS classrooms.

Control. The teacher-participants in this study expressed concern with losing control of their classrooms. From one perspective, the loss of control can be viewed as a disciplinary issue involving students who misuse technology. From another perspective, the teachers themselves must reset their classical views and realize that they may not be able to keep control of their classes and students in the Essentialist ways that they have always been accustomed to as "leaders" in their classrooms.

Cheating. While PEDs certainly offer students avenues to cheat that are unavailable through traditional methods (like photographing tests, access the internet, recording teachers, etc.), the same elements that make technology dangerous to

traditional assessment methods could benefit students learning in project-based environments where cheating cannot happen in a tradition sense.

The worry by this study's teacher-participants over cheating further emphasizes their fear of losing control, and their assumption that because something could go wrong with technology, that it likely will. During interviews, all six teacher-participants were pressed on the issue of cheating and they acknowledged that cheating happens in their classrooms even when technology is not being used. This revelation is indicative of a problem that simply cannot be blamed on technology.

Preparation. Teacher-participants in this study worry that they are either unprepared or under-prepared to effectively teach using PEDs. The technology is too rapidly advancing for teachers to become comfortable integrating new devices into their methodologies before they feel that they are having to start all over again with another new advancement in technology.

Fear. Teacher-participants in this study acknowledged that they were fearful of change and fearful of losing control in their classrooms and the integration of PEDs. The fear of change is evident is particularly concerning to the teacher-participants due the rapid evolution of technological change, not only within the school, but in the world. Before teachers can get accustomed to a new technology it is seemingly being replaced by something newer and better.

Responsibility. Teacher-participants in this study displayed great concern for the ability of high school student to responsibly use PEDs. With constant access via mobile devices to content such as video games, social media, movies/videos, cameras, etc., distractions are more engaging and more available than ever. Students, in the experience

of the six teacher-participants interviewed, have not yet displayed the maturity or the responsibility to fully distinguish themselves as capable users of PEDs.

Frustration. Overall, the six teacher-participants interviewed for this study expressed sincere frustration regarding technology integration. They are unsure exactly what school administration expects from the use of technology in classrooms, and even believe that the use of technology may have been pressed upon them simply because technology integration has been a buzz word in recent years. Is it possible that technology is being adopted by schools simply because it is a trendy expectation?

The frustration felt by these teacher-participants, along with the other patterns of concern identified during semi-structured interviews, can be addressed with targeted professional development. Educators simply need more time and more information to prepare themselves, and their curricula, for the technology that is infiltration their classrooms. Additionally, they need specific information, such as defined real-world lesson examples, during professional development in order to gain confidence, and reduce fears, as they practice integrating technology into their methods.

Theme: Lack of Professional Development Regarding Technology Integration

Each of the previously discussed patterns can be neatly grouped under the broad theme of a lack of professional development regarding technology integration. It is evident that the teacher-participants hold to an essentialist view of education, despite the fact that some of the data collected suggests that some of the teacher-participants harbor some progressive ideals. The lack of professional development amongst these educators has resulted in feelings of fear and worry in regards to new technologies and their places in classrooms (and in the hands of students). If progress is to be made, acknowledgment

must be given to the fact that the world we inhabit is not the world of the Industrial Revolution. Indeed, as Waks (2013) posited:

> We again stand witness to a fundamental social and technical transformation. Economic globalization, information technology networks, and postindustrial "knowledge" workplaces have prompted new trends in education – cooperative, collaborative, and other forms of active learning; interdisciplinary group projects; Internet-based curricula; charter schools, and even virtual schools, school districts, and universities. Some of these have been couched in a language reminiscent of Dewey and even explicitly in terms of continuities with Dewey's progressivism. (p. 74)

Conclusion

Based on the findings and results of the present action research study, one theme, encompassing six important patterns, emerged regarding educators' perceptions of students' uses of PEDs in classrooms. The broad theme of a lack of professional development regarding technology integration in classrooms can be seen in information gathered during this study's data collection, during which teacher-participants consistently mentioned concerns that can be categorized in the patterns of control, cheating, preparation, fear, responsibility, and frustration. The teacher-participants in this study overwhelmingly believed that integrating technology offered by PEDs into curriculum and instruction is beneficial to teaching and learning, though the teacher-participants simultaneously carry the belief that students in grades 9-12 do not currently show appropriate levels of maturity and responsibility when asked to use PEDs in academic settings. While some general suggestions were made regarding how to remedy

the issue of irresponsibility on the parts of the student users, none of the teacher-participants offered responses that could seemingly solve the issues at hand, and each of the teacher-participants believed that rapid change is still occurring regarding technology integration, further complicating the issue of solving the problems currently at hand.

A summary and discussion of the research is presented in Chapter Five of this dissertation, which uses the final two stages of action research, developing and reflecting, to finalize the present action research study. During the final two phases of the action research cycle, the participant-researcher used the results of this study to inform an action plan, along with the teacher-participants from this study, to improve the use of PEDs in all phases of curriculum and instruction—especially the planning and implementation phases for classroom teachers. Additionally, Chapter Five will present reflections on this study's methodology and make suggestions for improvements regarding this study and recommendations for areas which need further research.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND ACTION PLAN

Introduction

Chapter Five summarizes the findings and details the conclusions reached after reciprocal analysis of the data with the teacher-participants. The Chapter also delineates a detailed Action Plan designed to move Jackson High School (JHS) forward in terms of technology integration in the classroom. In review, the current study's problem of practice addresses the inconsistent use of personal electronic devices (PEDs) in JHS classrooms. Teachers were unsure when and how to incorporate the ubiquitous technology, leading to the research question: *What are high school educators' perceptions of students' use of PEDs in the classroom?* The purpose of the study was to determine JHS educators' perceptions on PED use for curricular and pedagogical use. Next, suggestions are made for future research based on the results of the current action research study. Finally, this Chapter ends with a conclusion that summarizes this action research study.

At the outset of this study, JHS allowed teachers to create their own rules regarding the use of PEDs and technology in their classrooms, though it was clear that misuse of PEDs and technology, such as communicating via text messaging, viewing videos, gaming, and utilizing photos and videos, were frowned upon and were grounds to have PEDs removed from the hands of students even if teachers were using

"applications" (apps) downloaded on students' phones or tablets that related to their subject matter. The problem I perceived was that students wanted to use their PEDs and the school did not want them to use their PEDs (with the exception of a few very specific instances that were created and controlled completely by teachers, such as the use of apps). According to Cator (2011), "We need to ensure that all of our students grow up understanding how to operate, think, learn, communicate and collaborate effectively in an online space" (p. 54). Therefore, an investigation into why the school, and as a result, its teachers, resisted allowing students free reign of the use of PEDs was needed.

A survey inquiring about JHS educators' perceptions regarding their students' uses of PEDs was delivered to the faculty during August of 2016 via SurveyMonkey. Forty-four educators responded to the survey, and their responses informed the development of questions that would then be asked to six researcher-selected semi-structured interview participants. The six semi-structured interview participants were selected from a group of teachers who indicated their willingness to participate in this study. Care was taken to select teachers who represented a broad spectrum of years of experience and academic subjects taught, as well as a variety of ages, and balance of men and women. Since the SurveyMonkey survey was answered anonymously, the participant-researcher did not yet have any information regarding the six teacher-participants' views regarding PEDs in their classrooms. The semi-structured interviews occurred during September 2016. Each interview was conducted in the participant-researcher's classroom.

The six teacher participants included three women and three men. The ages of the teacher-participants ranged from 22 to 55, and years of teaching experience ranged from

zero to 31. The six teacher participants represent most of the subjects taught at JHS, including science, Career and Technology Education (CATE), English, foreign language, math, and social studies.

Summary of the Research Findings

The data revealed a lack of meaningful, direct, and differentiated professional development (PD) among faculty that greatly impacted the perceptions JHS educators have regarding PED use and technology integration in classrooms. A summative data analysis of six teacher-participants' semi-structured interviews revealed attitudes firmly based in Essentialist education theory where subject matter is content discreet (instead of integrated) and where standardization permeates assessments as well curriculum and pedagogy (see for example the back-to-basics movement in American schooling).

Despite some of the teacher-participants verbalizing some Progressive educational theory ideas such as curricular integration, differentiated learning, heterogeneous grouping, and formative assessment strategies, Essentialist ideals were far more prevalent. In addition to the broad theme of a lack of professional development regarding technology integration, the summative analysis of this qualitative data collection revealed the following patterns:

- Control;
- Cheating;
- Preparation;
- Fear;
- Responsibility; and
- Frustration.

Each of the identified patterns fits under the umbrella of professional development. Additionally, each of the patterns can be addressed, and perhaps eliminated, with an open acknowledgement of the need to move JHS towards a progressive form of curriculum and pedagogy.

The teacher-participants stressed their lack of control with technology in the hands of students. They have constant fears that students are using technology irresponsibly; they worry that students are not doing just what they were told to do with their PEDs. With so many worries about compliance, the teacher-participants seem blind to the idea of control being something that we should be giving our students. If the technology is in their hands *without* step-by-step instructions and a long list of rules to follow, students will begin to use the technology as a tool to direct their own learning.

Cator (2011) notes, "We need to ensure that all of our students grow up understanding how to operate, think, learn, communicate, and collaborate effectively in an online space" (p. 54). This is progressive thinking that ignores the worries expressed by the teacher-participants in this action research study. Perhaps one of the reasons these teachers are so worried is that they operate under an essentialist paradigm that is effected solely by a laser-focus on student achievement that leaves no room for progressive thinking in this world of rapid technological advancement.

Key Questions

The results of the present action research study indicate a need for much more professional development (PD) at JHS. The professional development must be targeted at increasing teachers' proficiency with technology integration and must be differentiated to ensure that teachers across the spectrum of technology-integration proficiency feel that

the PD is valuable and worthy of their time. The PD must address the major concerns teachers have about irresponsible student use of PEDs and frustrations teachers have about being asked to incorporate technology when they do not feel ready or able to do so.

Key questions that must be addressed include:

1. Is building-level administration aware of the concerns teachers have regarding technology integration?
2. Are classroom teachers willing to honestly express their true concerns regarding technology integration without fear of retaliation if their views differ from the status quo or if their views make them seem unable or unwilling to match the administration's expectations for technology integration?
3. Is the school willing to shift its essentialist paradigm to a progressive paradigm, shifting the burden of control from teachers to students, to allow students to harness their own learning?
4. Which proficiency metrics are most important and does technology integration only matter if it impacts those metrics?

The current action research study originated with the identified problem that students want to use their PEDs in class and how the current curriculum and pedagogy of JHS frowns upon students using PEDs. Data collected in this study indicates that teachers' perceptions of how students use PEDs in class are mostly negative. Teachers perceive that students cheat, play games, utilize social media, text, view videos, access apps, and rarely use PEDs for academic purposes. If students want to change teachers' perceptions, they must also be asked questions:

1. How can teachers utilize technology to instigate appropriate academic usage?

2. What must be done to encourage students to view technology as an educational tool rather than a portal to socialization and entertainment?

Action Plan

During the Developing Stage of action research, Mertler (2014) explains the process of creating a plan of action; this is the stage from which action research borrows its name. "This stage consists primarily of taking the results of your data analysis, your interpretations of those results, and the final conclusions drawn from the interpretations and formulating a plan of action for the future" (Mertler, 2014, p. 210). The plan may include any or all of the following, each aimed at enacting an improvement on the subject the action research addressed: revised instructional methods, updated curricula, professional development, and suggestions for improvements to future cycles of action research.

Action Researcher

I am a 16-year veteran teacher, having served each year of my career at JHS. During my years at JHS, I have established myself as a progressive educator, especially within the realm of using technology in my classroom. My interest in the evolution of instructional technology led me to the problem of practice addressed in this dissertation and drove me to explore the perceptions of my colleagues regarding the ubiquitous presence of PEDs in the hands of the students we teach.

During the data collection process of this dissertation, I was careful to remain objective while gathering information from my colleagues. During semi-structured interviews, I remained as quiet as possible, not wanting to influence the perceptions the teacher-participants were sharing with me. Though I am technically an insider in this

research study, I do not feel that my insider status influenced the data I gathered from any of the six teacher-participants I interviewed, nor did my insider status infiltrate the conclusions I have drawn based on the data I gathered.

Personally, the research I have done has influenced the way that plan and execute my own teaching, but I am not confident that the results of my study will effect change at JHS. Though I am a veteran at my school, I do not hold a position of authority, and, unfortunately, I do not foresee my school's administration making any broad changes based on my findings.

In order to facilitate the progressive change needed regarding technology integration at JHS, I believe I would first need to convince our building and/or district level instructional coaches that sweeping changes need to be made to our professional development practices due to the overwhelming acknowledgement by my teacher-participants that they "don't know what to do with technology" (K. Waldrop, personal communication, January 18, 2017). Further, I believe that I can model the changes I want to see within my own classroom as first-hand proof that the positive results can come from shifting teachers' fears of lost control and low preparedness to student empowerment as they harness technology to control their own learning.

Developing an Action Plan

The basis of action research is that some type of action will result, either formally or informally, as a result of the findings of the study (Mertler, 2014). The current action research study produced data that overwhelmingly pointed to six areas of concern among the teacher-participants' perceptions of PEDs in classrooms: control, cheating, preparation, fear, responsibility, and frustration. Each of these patterns can stand alone as

a concern regarding technology integration, and each can be integrated with one or more of the other identified patterns as combined challenges that must be addressed if JHS is to move forward with its vision of preparing students for life after high school in the 21st century.

Each of the six identified patterns from this study can be remedied, and the remedy lies in the form of professional development. Mertler (2014) says action research studies can "serve as the basis for professional development, where all members of the particular community engage in not only a common professional development program but one that is also research based" (p. 214). The personal and professional growth that can occur with well-planned professional development can also lead to future cycles of action research, either as extensions of the original study, or as new studies altogether.

After gathering and analyzing data during the acting stage of my research process, I reconvened with my teacher-participants to discuss the action plan. After brief face-to-face communications, I distributed a Google Form to my teacher-participants to facilitate the gathering of comments regarding their thoughts on the developing action plan. Each of my six teacher-participants participated in this reciprocal exchange. The information gathered during these exchanges informed the final action plan, which I have named P5, short for Progressive Five. P5 will be discussed fully in the following section of this chapter.

Action Plan Details

Teacher-participants in this study each expressed serious concerns regarding technology integration in their classrooms. While each teacher indicated their belief that technology *can* be beneficial to teaching and learning, most of the data collected during

my six semi-structured interviews was focused on the negative effects PEDs have on student learning and the surrounding classroom atmospheres. After analyzing the data collected during the interviews, six patterns emerged: control, cheating, preparation, fear, responsibility, and frustration. This action plan is designed to address each of these patterns using targeted and differentiated school-level professional development.

Progressive Five (P5), is an action plan designed to empower teachers, giving them the confidence they need to effectively integrate technology in their classrooms. The five Ps of Progressive Five categorize the elements needed for successful technology integration: Professional Development, Policy, Pedagogy, Patience, and Practice. The five elements of this action plan do not stand alone. Rather, they combine to provide teachers a way to remember the primary goals of technology integration. In order to impact positive and Progressive classroom change, each element of P5 must be collectively and consistently applied.

Professional Development. Professional development (PD) will be designed and executed on a school-level with committee consisting of administration and instructional coaches, along with me. The committee, armed with information provided by teachers, will be tasked with identifying current needs and implementing technology integration training to all faculty at least once per nine weeks during each of the next two academic years.

According to the results of my study, one of the primary needs for PD is differentiation. All teachers at JHS do not operate with the same needs (content areas taught, standards requirements, etc.), and all teachers at JHS do not have the same level of understanding or proficiency with technology. Therefore, PD will be differentiated to

make the best use of teachers' time, and to best serve their individual needs. PD will be held during teachers' planning periods.

It will be essential for teachers to inform me and the planning committee of their needs in regards to effective implementation. As teachers progress and improve with technology integration in their classrooms, their PD needs will also change. Additionally, continuous changes in technology itself will result in the need for even the most proficient teachers to continually receive professional development.

Policy. Policies must be present on both school and classroom levels. JHS currently allows teachers to implement their own classroom policies regarding the use of PEDs. The lack of consistency in this area was one of the driving factors behind this study. Teachers and students desire consistency. JHS must create a policy that is developed collaboratively with teachers, students, and parents regarding responsible technology use, and the policy must be revisited and updated on a continuous basis due to the rapid evolvement of the technology landscape in our school, and in a larger part, the world. Technology will continue to change as time goes by. Educational policies must be cognizant of those changes, and must be regularly updated to reflect current needs for teachers and students. An example of a technology change that may influence policy is the current influx of wearable technology, such as smart watches. The advancements should not and cannot be ignored by educators.

Pedagogy. The way teachers teach must be updated to meet the changing needs of students and the changing capabilities of technology in our globally networked world. "It's not really a technology plan; it's much more an education plan that's enabled by technology" (Cator, 2011, p. 52). The emphasis with technology integration mush be on

learning. The emphasis cannot be on the technology itself. Mobile technology, such as the Chromebooks and smartphones examined in this study, is in the hands of every teacher and student at JHS.

Currently, most teachers perceive the technology as a distraction to learning. They feel that students spend far too much time using their devices to play games, watch videos, and participate in social media activities than they do using the devices for meaningful educational opportunities. This is where the paradigm must shift. Students must learn to view their devices as tools that are capable of much more than entertainment. Students must begin to view their devices as necessary for school—supplies that are as necessary as pencil and paper. For this change to occur, teachers must be educated on ways to change their pedagogy in such a way that technology is needed. The changes cannot be optional uses for technology. For example, typing an assignment they used to write by hand does not change the pedagogy of a lesson, but rather changes the tool used to complete a task. The change that must occur is, for example, requiring students to record and distribute a video podcast analyzing a poem read in class. An assignment such as this mandates the use of technology because it simply cannot be completed without it.

Patience. The teacher-participants in this study indicated over and over again that technology is changing too quickly for them to adapt their classroom methods. Before they become comfortable with one change, another change is already incoming. The rapidity of change, while problematic, should not be harbinger for keeping things the same until things settle down. The world is connected and communicating in ways that were unfathomable only two decades ago. These changes are, indeed, occurring rapidly,

and no end to these changes seems to be in sight. Educators must be proponents for change, and exercise patience as schools adjust and adapt to meet the needs of teaching and learning. Cator (2011), former director of the Office of Educational Technology at the U.S. Department of Education, recognized technology's influence and constant changes:

> Technology has totally changed the way that we conduct business. It's changed the way we socialize with friends and with our relatives. It's the way people are organizing meetings or even protests. It has changed the way that we find our way from one geographical location to another. Technological advances have changed so much of how we are able to operate on a day-to-day basis. But we haven't realized the promise of what we know can happen when students and teachers are, frankly, powered up with the opportunity to learn with technology. (p. 53)

Teacher-participants in this study indicated the fear of change, and the fear of misuse of technology. These fears must be addressed as part of the PD delivered by the school. Teachers must be empowered to enact change in their classrooms without fear of violating school policies (previously mentioned in this action plan), and without fear of failure (particularly in terms of student achievement). Just as traditional methods of teaching require patience and time, so will pedagogical methods that infuse technology into the curriculum.

Practice. This Action Plan's final category is Practice. No formal citation of any particular study is needed to understand the necessity of practicing something until it is able to be done effectively. Every skill, academic or otherwise, must be practiced to be

perfected. Educators, thus, must practice implementing technology into their methods, and they must be able to do so with impunity. If teachers fear punishment, they will not change methods that have been reliable for them in the past.

This action plan will encourage teachers to use technology to transform the learning experiences they provide in their classrooms. The experiences of the faculty's practice with new lessons and methods will likely be the source of future iterations of PD conducted to foster the continuous change sought by the overall P5 plan.

Limitations. This action research plan, and the study that spawned it, is not without limitations. Time was a major factor in this study. It was implemented over only one semester of one academic year. Future cycles of this action research would benefit from a longer research period, in addition to a larger sample of teacher-participants. Additionally, research would likely benefit from the inclusion of students and their parents as part of the data collection.

P5. The culmination of this cycle of the current action research study would be the successful implementation of P5. Jackson High School can benefit from a shift from its current essentialist pedagogy to a more progressive pedagogy, simultaneously paving the way for a more technology friendly learning environment for teachers and students. My action plan would utilize regularly scheduled professional development to continuously engage educators in the improvement technology integration by addressing policy, pedagogy, patience, and practice on a cyclical basis. As I, along with school-level instructional coaches and administrators, implement this program, JHS and its educators will begin to deliver the technology education each student deserves.

Suggestions for Future Research

This action research study began at a time before Jackson High School implemented a 1-to-1 Google Chromebook initiative that placed a mobile device in the hands of each student. The primary device I planned to explore was the ubiquitous smartphone. Nearly two years into the study, JHS adopted Chromebooks and the technological landscape of the school changed. Future research would certainly benefit from a more direct and independent inquiry into the benefits of each type of technology, Chromebooks and smartphones.

Another area for future research would involve expanding this action research beyond JHS and into lower grade levels in the school district. Concern exists in the area of how and when students should be taught appropriate classroom and academic uses of technology. Overwhelmingly, the teacher-participants in this study believed that appropriate use should be taught and learned by students long before they reach high school. The future research could investigate how to educate younger users on the proper etiquette of PED use in classrooms and it could also indicate what age groups are most conducive to learning that etiquette.

Finally, further research is needed to examine the current physical set-up of Jackson High School. While a study that examines the physical set-up of a traditional classroom poses serious limitations, the fact that schools and classrooms have stayed remarkably the same since the Industrial Revolution is bothersome. If technology is truly going to transform education, it is likely that the physical atmosphere today's schools utilize could benefit from a reimagined, and more technology-friendly, set-up.

Conclusion

Mobile technology is ubiquitous and capable. As an educator who recognized the unrequited desires of my students to incorporate their beloved devices into classroom practice, I embarked on this study. I wanted to explore what teachers at my school perceived about PEDs, and I wanted to develop a plan to enact changes to benefit my students, my school, and myself. A school-wide faculty survey about PED use led to a series of six semi-structured interviews with teachers representing multiple disciplines within JHS. Three men and three women, ranging in age from 22 to 55, and in years of teaching experience from zero to 31, provided insight into the state of technology integration at our school.

My research question asking about teachers' perceptions of PEDs in JHS classrooms was answered with resounding uncertainty. All six teacher-participants recognized value in technology and belief in its capabilities to improve teaching and learning, yet all six teacher-participants also noted myriad hurdles and roadblocks that stand in the way of technology having a truly positive impact on the educational experience. Primary concerns can be categorized as worries about loss of teacher control, students using devices to cheat, a lack of preparation on how to use technology effectively, a general fear of using (or misusing) technology, a lack or responsible use by students, and, ultimately, a frustration with a rapidly changing technological world.

Based on the data collected during my research, and in reciprocity with my teacher-participants, I developed an action plan designed to move Jackson High School out of its current essentialist framework and into a progressive model of education that focuses on the incorporation of technology in each teacher's curriculum. This plan is

designed to give teachers the information and preparation they need to confidently and consistently incorporate technology into their pedagogy without the concerns and fears they have previously expressed. The action plan, P5, will utilize regularly scheduled professional development for a two-year period in which the educators at JHS will focus on progressive changes in policy, upgrades to pedagogy, diligent patience, and cyclical practice, all in order to effect a positive change on learning environments of our school and the teaching and learning that happens within. Successful implementation of the action plan at JHS could influence future changes regarding technology integration at other schools in my district and beyond.

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APPENDIX A – EDUCATOR SURVEY

Survey for Educators on Personal Electronic Devices (PEDs) in Classrooms

Welcome

Fellow educator, please fill out this survey to the best of your ability. The survey is divided into six sections. It should take approximately 15-20 minutes to complete the survey. For the purpose of this survey, "mobile device" includes any handheld device capable of multiple functions, including, but not limited to, accessing the internet, running applications, listening to music, and checking emails. Examples of such devices include smartphones, such as Apple's iPhone, as well as other devices, such as iPads and other tablet technologies. Mobile devices such as limited or single-feature cell phones should not be considered. Thank you for your participation.

Objective: To survey attitudes, perceptions and utilization of mobile devices by secondary school educators.

By completing this survey, you are agreeing to participate in this study. If you have any concerns or questions about your rights as a participant, please contact Alex J. Hollis at ajhollis@email.sc.edu or at 864-472-2836.

Survey for Educators on Personal Electronic Devices (PEDs) in Classrooms

Demographics

1. Which category best describes your current age?

- ◯ 20-30
- ◯ 31-40
- ◯ 41-50
- ◯ 51-60
- ◯ 61-70
- ◯ 70+

2. What is your gender?

- ◯ Female
- ◯ Male

3. Are you a certified teacher or administrator?

- ◯ Yes
- ◯ No

4. What is your current area of certification? Please select all that apply.

- [ ] Administrator/Teacher
- [ ] Agriculture
- [ ] Art
- [ ] Business/CATE
- [ ] English
- [ ] Family and Consumer Science
- [ ] French
- [ ] Guidance
- [ ] Industrial Arts
- [ ] Math
- [ ] Physical Education
- [ ] Library Science/Media Specialist
- [ ] Science
- [ ] Social Studies
- [ ] Spanish
- [ ] Special Education
- [ ] Speech

Other (please specify)

5. What subjects do you currently teach? Please select all that apply.

- [ ] Administrator/Teacher
- [ ] Agriculture
- [ ] Art
- [ ] Business/CATE
- [ ] English
- [ ] Family and Consumer Science
- [ ] French
- [ ] Guidance
- [ ] Industrial Arts
- [ ] Math
- [ ] Physical Education
- [ ] Library Science/Media Specialist
- [ ] Science
- [ ] Social Studies
- [ ] Spanish
- [ ] Special Education
- [ ] Speech

Other (please specify)

6. How many years have you been working in education?

- ( ) 1-5
- ( ) 6-10
- ( ) 11-15
- ( ) 16-20
- ( ) 21-25
- ( ) 26-30
- ( ) 31-35
- ( ) 36-40
- ( ) 40+

7. About how many years have you been in your current position?

- ◯ Less than 1 year
- ◯ At least 1 year but less than 3 years
- ◯ At least 3 years but less than 5 years
- ◯ At least 5 years but less than 10 years
- ◯ 10 years or more

8. Which race/ethnicity best describes you? (Please choose only one.)

- ◯ American Indian or Alaskan Native
- ◯ Asian / Pacific Islander
- ◯ Black or African American
- ◯ Hispanic
- ◯ White / Caucasian
- ◯ Multiple ethnicity / Other (please specify)

9. What grade levels do you currently teach? Please select all that apply.

- ☐ 9
- ☐ 10
- ☐ 11
- ☐ 12

10. What is the highest level of school you have completed or the highest degree you have received?

- ◯ Bachelor's degree
- ◯ Bachelor's degree +18 hours
- ◯ Master's degree
- ◯ Master's degree +30 hours
- ◯ Specialist degree
- ◯ Doctoral degree

Survey for Educators on Personal Electronic Devices (PEDs) in Classrooms

Prior Knowledge

11. I know how to... (Please select all that apply.)

- [ ] Access the internet from a mobile device
- [ ] Download a podcast on a mobile device
- [ ] Download a mobile application (app) on a mobile device
- [ ] Use a mobile device to find the definition of a word I don't know
- [ ] Use a mobile device as a calculator
- [ ] Set an alarm/alert for a due date on a mobile device
- [ ] Translate a sentence into another language on a mobile device
- [ ] Access a social networking site on a mobile device
- [ ] Send an email on a mobile device
- [ ] Post a comment to a blog or respond to a post on a mobile device

12. I think my students are... (Please select all that apply.)

- [ ] Downloading applications (apps) that help them learn something new.
- [ ] Using mobile devices to look up something that they didn't know or didn't understand during class.
- [ ] Engaging in social networking on their mobile devices.
- [ ] Writing notes on their mobile devices to remind themselves of assignments.
- [ ] Setting alarms, alerts, or reminders on their mobile device to help them remember that an assignment is due or a test is coming up soon.
- [ ] Texting a classmate during class.
- [ ] Texting a classmate about the content of the class.
- [ ] Texting a classmate about the teacher's actions or abilities.
- [ ] Texting a classmate about the level of engagement in the class (i.e. I'm bored, This is cool, etc.)
- [ ] Taking pictures or videos with their mobile device that they will use for an assingment.
- [ ] Accessing an Education Management System (i.e. PowerSchool) or Learning Management System (i.e. Google Classroom) on their mobile device.
- [ ] Using their mobile device as a study tool.
- [ ] Playing educational games on their mobile devices.
- [ ] Playing non-educational games on their mobile devices.
- [ ] Watching videos unrelated to class on their mobile devices.
- [ ] None of the above.
- [ ] I don't know what they are doing on their mobile devices.

Other (please specify)

Survey for Educators on Personal Electronic Devices (PEDs) in Classrooms

Perceptions of Mobile Device Utilization in the Classroom

For each item in this section, please select Strongly Disagree, Disagree, Agree, or Strongly Agree.

13. My students would be more likely to participate in class activities (excluding class discussions) outside of class time if they could do so through their mobile devices.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

14. My students would be more likely to engage in class discussions inside of class if they could post their thoughts from their mobile devices.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

15. My students would be more likely to engage in class discussion outside of class if they could post their thoughts from their mobile devices.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

16. My students would be more likely to ask for help if they could communicate with me (their teacher) through their mobile device.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

17. Mobile learning should be incorporated into classes/lessons at my school.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

18. Students should be able to easily view course material(s) (i.e. Syllabi, notes, assignments) on their mobile devices.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

19. Students should be able to, while in class, download mobile applications (apps) that could help them learn/study.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

20. Students should be able to access Educational Management Systems in a mobile format on their mobile devices.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

21. Students should be able to takes quizzes on their mobile devices.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

22. Students should be able to participate in discussion forums on their mobile devices.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

23. It would not require a lot of effort for students to learn how to use a mobile application designed for my class.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

24. Learning on a personal mobile device would be easy for students because they are already familiar with how the device functions.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

25. It would be easy for students to engage in discussions (and comment on discussions) using a mobile application (app) or website in a mobile format.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

26. Mobile learning opportunities would allow students to learn and study in places they couldn't normally.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

27. It would be easier for students to complete classwork and assignments if they could use their mobile devices in class.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

Survey for Educators on Personal Electronic Devices (PEDs) in Classrooms

Perception of Mobile Device Usage on Students' Learning Engagement in High School Classrooms

For each item in this section, please select Strongly Disagree, Disagree, Agree, or Strongly Agree.

28. I believe students can be taught how to appropriately use mobile devices for learning.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

29. I believe students should be able to use mobile devices as learning tools in my classroom in order to improve comprehension of class content.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

30. I believe using mobile applications (apps) for learning in my classroom would benefit students' writing skills.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

31. I think students would be more motivated to learn if they could use mobile devices regularly in class.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

32. Students would think it is fun to use an interactive mobile device in my classroom.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

33. I believe using mobile applications (apps) as learning tools in my classroom would improve student literacy.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

34. I would like my students to be able to use their mobile devices to access my course content and to be able to practice skills needed for my class.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

35. I would like to learn more about mobile learning so that I can incorporate it into my classroom.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

36. I would like to learn how to create mobile applications (apps) so that I can incorporate them into my lessons.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

37. Choose the statement that best represents your attitude toward incorporating mobile learning in your future classroom.

- ○ I will be able to effectively incorporate mobile learning into my classroom.
- ○ With proper training, I will be able to effectively incorporate mobile learning into my classroom.
- ○ I do not think I will be able to incorporate mobile learning into my classroom.
- ○ I have no interest in incorporating mobile learning into my classroom.

Survey for Educators on Personal Electronic Devices (PEDs) in Classrooms

Faculty Opinions on Social Media Use

For each item in this section, please select Strongly Disagree, Disagree, Agree, or Strongly Agree.

38. Social media can be a valuable tool for collaborative learning.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

39. Use of social media in the classroom would lead to increased instances of cyberbullying and/or other classroom inappropriate usage.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

40. Videos, podcasts, and blogs are valuable tools for teaching.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

41. Schools/districts should lift bans and allow teachers and students to use social media in secondary schools.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

42. The use of social media in the classroom would increase my students' engagement in learning activities.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

43. Texting weakens students' writing and verbal skills.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

44. Texting is an effective form of communication and should be used in educational settings.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

45. Texting is often substituted for oral conversation.

Strongly Disagree	Disagree	Agree	Strongly Agree
○	○	○	○

Survey for Educators on Personal Electronic Devices (PEDs) in Classrooms

Personal Concerns

46. If the school/district allowed/encouraged students to use mobile devices as learning tools in the classroom, would you be willing to receive professional development and training in the use of such mobile devices?

- Yes
- No
- Maybe

47. Would you be willing to use your personal mobile device to facilitate student learning?

- Yes
- No
- Maybe

48. If the school/district encourage students to use mobile devices as learning tools in the classroom, would you expect your school district to provide you with mobile learning devices and technical support, such as, but not limited to, data packages, text messaging, educational apps, etc.?

- Yes
- No
- Maybe

49. If the school/district encouraged students to use personal mobile devices as learning tools in the classroom, the way you communicate with students would change. Students would have access to your time beyond the traditional school day. Would you be in favor of this infringement on your time outside of school hours?

- Yes
- No
- Maybe

50. If the school/district encouraged students to use mobile devices as learning tools in the classroom, use of the mobile devices would change the way you communicate with students. Are you concerned about the possibility of inappropriate communication between teachers and students?

- ◯ Yes
- ◯ No
- ◯ Maybe

51. Students using mobile devices during class time is different than students doodling, drawing, or writing notes on paper.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

52. What are the primary barriers to integrating mobile devices into the classroom? Please select all that apply.

- ☐ Too much planning time needed to plan mobile device integration
- ☐ Invasion of privacy when using personal devices
- ☐ Discipline issues with students improperly using devices
- ☐ Not all students have mobile devices
- ☐ Students using devices to cheat
- ☐ Students using devices to bully other students
- ☐ Teachers not knowing how/when to incorporate devices
- ☐ Teachers not being able to regulate what students are actually using their devices for during class time
- ☐ Technology (devices, software, apps, internet connection) not working properly and ruining a lesson

Other (please specify)

53. Do you have any other comments, questions, or concerns (Please be as specific as possible)?

APPENDIX B – RESEARCH PLANNING SCHEDULE

Activity to be Completed	Estimated Amount of Time Needed	Target Date for Completion	Task Completed (Yes/No)
Finalize consent forms	1 week	Summer 2016	**Yes**
Meet with school principal to finalize action research plans	1 hour	August 12, 2016	Yes
Invite teacher-participants to take part in the study	1 week	August 10-12	Yes
Explain research process to teacher-participants	30 minutes	August 23, 2016	Yes
Data collection (surveys/interviews)	4 weeks	September/October 2016	Yes
Integrate, develop, and refine data/interviews	12 weeks	December, 2016	Yes
Finalize interviews	1 week	December, 2016	Yes
Analyze Data	1 month	January, 2017	Yes
Create Action Plan	1 month	January, 2017	Yes
Finish chapters 4 and 5 of DiP	1 month	January, 2017	Yes
Revise DiP for defense	1 month	February, 2017	Yes

APPENDIX C – FIELD NOTES PAGE

Observation #_____ Date_____ Time_____	Observations	Observer's Comments

APPENDIX D – CONSENT FORM

Dear Participants,

My name is Alex J. Hollis. I am a doctoral candidate in the Education Department at the University of South Carolina. I am conducting a research study as part of the requirements of my degree in Curriculum and Instruction, and I would like to invite you to participate.

I am studying teachers' perceptions of personal electronic devices (PEDs, particularly cell phones) in secondary education classrooms. If you decide to participate, you will be asked to complete a survey regarding your perceptions of PEDs in school and/or meet with me for an interview about your perception of PEDs in school. In particular, you will be asked questions about your perceptions regarding PED use in classroom environments.

You may feel uncomfortable answering some of the questions. You do not have to answer any questions that you do not wish to. Any meetings will take place at a mutually agreed upon time and place and should last no more than 90 minutes. Interviews will be audio or video recorded so that I can accurately reflect on what is discussed. The recordings will only be reviewed by me. I will transcribe and analyze them. They will then be destroyed.

Participation is confidential. Study information will be kept in a secure location. The results of the study may be published or presented at professional meetings, but your identity will not be revealed. Please do not write your name or other identifying information on any of the study materials.

Taking part in the study is your decision. You do not have to be in this study if you do not want to. You may also quit being in the study at any time or decide not to answer any question you are not comfortable answering. If you choose not to participate, please sign the appropriate line at the end of this letter and return it to me. Should you choose to participate, you do not need to return the letter.

I will be happy to answer any questions you have about the study. Upon completion of this study, a summary of the results will be made available to you by request. You may contact me at 864-472-2836 or AJHollis@email.sc.edu or my faculty advisor Dr. Susan Schramm-Pate at 803-777-3087 or sschramm@mailbox.sc.edu if you have study related questions or problems.

If you have any questions about your rights as a research participant, you may contact the Office of Research Compliance at the University of South Carolina at 803-777-7095.

Thank you for your consideration.

With kind regards,

Alex J. Hollis
864-472-2836
AJHollis@email.sc.edu

If you **do not** wish to participate in this study, please complete the following lines and return this document to my school mailbox.

_____

Printed Name of Participant

_____

Signature of Participant Date